

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent No: 7,340,506
Reexam Control No.: TBD

Currently in Litigation Styled:

*WebXchange v. Allstate, WebXchange
v. Dell, and WebXchange v. FedEx,*
C.A. Nos. 08-131, 08-132, 08-133,
respectively (D. Del.)

*Microsoft Corporation v. WebXchange
Inc.,* CV 08-5149 (N.D. Cal.)

Issued: March 4, 2008

Filed: February 23, 2001

Applicant: Lakshmi Arunachalam

Title: Value-Added Network
Switching and Object Routing

Request for Inter Partes Reexamination of Patent

MAIL STOP *INTER PARTES* REEXAMINATION
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Sir:

Reexamination under 35 U.S.C. §§ 311-316 and 37 C.F.R. § 1.902 *et seq.* is requested of claims 1 through 19 of United States Patent No. 7,340,506 ("the '506 patent" or "the patent" attached as Exhibit 1). The '506 patent issued on March 4, 2008, to Lakshmi Arunachalam ("Applicant"). The Requester is Microsoft Corporation ("Requester"). **Per 37 C.F.R. § 1.915(b)(8), Requester Microsoft Corporation is also the Real Party in Interest.** This is a new reexamination request ("Request"). The '506 patent has not been previously reexamined.

In accordance with 37 C.F.R. § 1.985, Requester hereby provides notice that the '506 patent is asserted against Microsoft customers Allstate, Dell, and Federal Express in litigations styled *WebXchange v. Allstate*, *WebXchange v. Dell*, and *WebXchange v. FedEx*, case numbers 08-131, 08-132, 08-133, respectively, in the United States District Court for the District of Delaware (collectively, the "WebX Litigation"),¹ and is also the subject of a declaratory judgment action brought by Microsoft, styled *Microsoft Corporation v. WebXchange Inc.*, case number 08-5149, in the United States District Court for the Northern District of California (the "Microsoft Litigation;" taken collectively with the WebX Litigation, these cases will be referred to generally as the "Litigations.")

Requester respectfully submits that, on the basis of previously uncited patents and printed publications and patents and printed publications being presented in a new light in this Request, substantial new questions exist as to the patentability of claims 1-19 of the '506 patent. This Request satisfies the requirements of 37 C.F.R. § 1.915(b) as follows:

37 C.F.R. § 1.915(b)(1): Reexamination of claims 1-19 of the '506 patent is requested.

37 C.F.R. § 1.915(b)(2): This Request is based on the prior art references listed in Section I, Paragraph A.

37 C.F.R. § 1.915(b)(3): A statement of each substantial new question of patentability is presented in Section IV, Paragraphs B and C. A table summarizing the substantial new questions of patentability ("SNQs"), and cross-referencing the pages where

¹ Throughout this Request and the attached Appendices, Applicant's claims are being construed in a manner consistent with the proposed constructions asserted by the purported patent owner in the WebX Litigation. (See Exhibit 3, WebXchange's Opening Claim Construction Brief in the WebX Litigation.) Requester disagrees that Applicant's disputed constructions, as set forth in Exhibit 3, are appropriate in the Litigations.

each SNQ may be found, is located at page 5 of this Request. A detailed explanation of the pertinency and manner of applying the prior art to each claim element in the requested claims is provided in Section IV, Paragraphs B and C, and is further set forth in the supporting claim charts that are referenced in Section V, Paragraphs A-C and attached as Appendices A-C to this Request.

37 C.F.R. § 1.915(b)(4): Copies of the references relied upon in paragraphs (b)(1) through (3) above are attached as Exhibits 4-12.

37 C.F.R. § 1.915(b)(5): A copy of the entire '506 patent is included at Exhibit 1. Additionally, a copy of the '506 patent file history, including the List of Prior Art Cited by Applicant filed during the prosecution of the '506 patent, is attached as Exhibit 2.

37 C.F.R. § 1.915(b)(6): A certification of service of this Request on the purported patent owner is provided on the last page of this Request.

37 C.F.R. § 1.915(b)(7): Requester certifies that this is a new Request, and that therefore the estoppel provisions of 37 C.F.R. § 1.907 do not prohibit this Request.

37 C.F.R. § 1.915(b)(8): Requester, identified above, is the real party in interest to this Request.

**I. STATEMENT IDENTIFYING THE PRIOR ART
REFERENCES ESTABLISHING SUBSTANTIAL NEW
QUESTIONS OF PATENTABILITY PURSUANT TO 37 C.F.R. § 1.915(B)(2)**

A. References Raising Substantial New Questions Of Patentability

The following references present substantial new questions of patentability, *e.g.*, anticipation under 35 U.S.C. § 102 and obviousness under 35 U.S.C. § 103, of Claims 1-19 of the '506 patent, and are listed on an Information Disclosure Statement (1449), attached as Exhibit 16:

- Exhibit 4 Andrew Payne *et al.*, U.S. Pat. No. 5,715,314, issued February 3, 1998 (hereinafter “**Payne**”);
- Exhibit 5 David K. Gifford, U.S. Pat. Appl. No. 08/168,519, filed December 16, 1993 (hereinafter “**519 Application**”);²
- Exhibit 6 David K. Gifford, U.S. Pat. No. 5,724,424, issued March 3, 1998 (hereinafter “**Gifford**”);
- Exhibit 7 Karl L. **Ginter** *et al.*, U.S. Pat. No. 5,910,987, issued June 8, 1999 (hereinafter “**Ginter**”);
- Exhibit 8 Nicolas **Popp** *et al.*, U.S. Pat. No. 6,249,291, issued June 19, 2001 (hereinafter “**Popp**”);
- Exhibit 9 Marshall T. Rose and Keith McCloghrie, “Structure and Identification of Management Information for TCP/IP-based Internets,” Network Working Group Requests for Comments No. 1155, published May 1990 (hereinafter “**Rose RFC 1155**”);
- Exhibit 10 Keith McCloghrie and Marshall Rose, “Management Information Base for Network Management of TCP/IP based internets: MIB-II,” Network Working Group Request for Comments No. 1213, published March 1991 (hereinafter “**McCloghrie RFC 1213**”);
- Exhibit 11 Keith McCloghrie and James M. Galvin, “Party MIB for version 2 of the Simple Network Management Protocol (SNMPv2),” Network Working Group Request for Comments No. 1447, published April 1993 (hereinafter “**McCloghrie RFC 1447**”); and
- Exhibit 12 Mark A. **Miller**, “Managing Internetworks with SNMP: the definitive guide to the Simple Network Management Protocol (SNMP) and SNMP version 2,” published August 5, 1993 (excerpts) (hereinafter, “**Miller**”).

² Payne specifically incorporates by reference “the entire disclosure” of the “519 Application”) (see Payne, Col. 1, lines 18-24), which is considered part of the Payne reference for purposes of 35 U.S.C. § 102. *See Advanced Display Systems v. Kent State University*, 212 F.3d 1272, 1282 (Fed. Cir. 2000) (material specifically incorporated by reference into a document may be considered in an anticipation determination) (citations omitted).

B. Summary Of SNQs/Proposed Rejections And Page References

SNQ#/ (Paragraphs)	Primary Reference	Secondary Reference(s) (In View Of)/ Grounds For Rejection	Claims	Pg.# For SNQ	Appendix For Detailed Appl. Of Prior Art To Claim Elements
1 (1) – (19)	Payne	(None) – 102(e)	1-19	Pg. 106	Appendix A
2 (20) – (38)	Ginter	(None) – 102(e)	1-19	Pg. 121	Appendix B
3 (39) – (53)	Popp	(None) – 102(e)	1-11, 14-16, 19	Pg. 142	Appendix C
4 (54) – (72)	Payne	(None) – 103(a)	1-19	Pg. 153	Appendix A
5 (73) – (91)	Ginter	(None) – 103(a)	1-19	Pg. 169	Appendix B
6 (92) – (110)	Popp	(None) – 103(a)	1-19	Pg. 191	Appendix C
7 (111) – (129)	Payne	Gifford – 103(a)	1-19	Pg. 200	Appendix A
8 (130) – (148)	Popp	Rose RFC 1155 – 103(a)	1-19	Pg. 223	Appendix C
9 (149) – (167)	Popp	McCloghrie RFC 1213 – 103(a)	1-19	Pg. 235	Appendix C
10 (168) – (186)	Popp	McCloghrie RFC 1213, In Further View Of McCloghrie RFC 1447 – 103(a)	1-19	Pg. 246	Appendix C
11 (187) – (205)	Popp	McCloghrie RFC 1213, In Further View Of Miller – 103(a)	1-19	Pg. 259	Appendix C
12 (206) – (214)	Popp	Payne – 103(a)	5, 7-9, 12-13 and 17-19	Pg. 273	Appendix C
13 (215) – (223)	Popp	Gifford – 103(a)	5, 7-9, 12-13 and 17-19	Pg. 279	Appendix C

SNQ#/ (Paragraphs)	Primary Reference	Secondary Reference(s) (“In View Of”)/ Grounds For Rejection	Claims	Pg.# For SNO	Appendix For Detailed Appl. Of Prior Art To Claim Elements
14 (224) – (231)	Popp	Payne, In Further View Of Gifford – 103(a)	5, 7-9, 13, and 17-19	Pg. 286	Appendix C
15 (232) – (240)	Popp	Rose RFC 1155, In Further View Of Payne – 103(a)	5, 7-9, 12-13, and 17-19	Pg. 297	Appendix C
16 (241) – (249)	Popp	McCloghrie RFC 1213, In Further View Of Payne – 103(a)	5, 7-9, 12-13, and 17-19	Pg. 304	Appendix C

II. APPLICANT’S PATENTS BASED ON NETWORK TRANSACTIONS

The ‘506 patent applicant, Ms. Arunachalam (“Applicant”), has filed a number of patent applications and received a number of patents. Three of these patents are asserted against Requester’s customers in the WebX Litigation, and are also the subject of the Microsoft Litigation. Requester expects to file reexamination requests on each of the three patents identified below. The following table lists these three patents and indicates (in **bold**) the patent that is the subject of this Request:

U.S. Pat. No.	Application	Filed	Issued	Reexam. No.
5,778,178	700,726	Aug. 5, 1996	Jul. 7, 1998	TBD
6,212,556	09/296,207	Apr. 21, 1999	Apr. 3, 2001	TBD
7,340,506	09/792,323	Feb. 23, 2001	Mar. 4, 2008	TBD

**III. OVERVIEW OF THE '506 PATENT
AND THE PRIOR ART SETTING FORTH THE SAME SOLUTION**

A. Field Of The Purported Invention

The claims at issue relate to business methods, both when expressly phrased as such (*see, e.g.*, Claim 1), and when recited as an apparatus for performing those methods (*see, e.g.*, Claim 14). The claims relate to conducting electronic transactions between a user's computer or other similar device, and other computers, to complete a commercial transaction over a digital network.

In everyday electronic commerce, computers frequently communicate with each other to consummate sales. In almost every case, the buyer and the seller use different computers. Additional computers may also be involved, such as computers operated by third party banks or other payment computers, such as Visa or MasterCard. None of this was new in 2001, when the application leading to the '506 patent was filed. Nor was any of this new six years before, in November, 1995, when the first provisional application in Applicant's chain of priority was filed.³

Neither was there anything new or novel about using an object "router" or "value-added network switch," as claimed in certain dependant claims in the '506 patent. Routing, or finding a path to information and objects over networks of various types was accomplished long before November 1995, including, for example, using packet switching protocols, such as the one used in the Payne patent, which was cited but not relied upon by

³ It is Requester's position that Applicant's provisional application, filed in November 1995, does not provide an enabling written description of the full scope of the '506 patent claims at issue in this Request, and that therefore the claims are not entitled to be backdated to November 1995, or any date prior to the date that the '506 patent application was filed. Regardless, the prior art included in this Request is presumed prior art (as set forth in the description of each piece of prior art) under at least 35 U.S.C. § 102(e), even if Applicant were entitled to backdate her claims.

the Examiner during prosecution of the '506 patent. Payne specifically described a "network-based sales system," where information and objects are passed between computers interconnected by a "computer network."

Finally, there was nothing new about naming objects, storing information entries associated with objects and values for these entries in a "virtual information store," and/or assigning to each object a unique address on a given network. Payne, for example, teaches the creation of a database containing information about objects available from various locations on the network. Payne further discusses having identifiers to identify specific objects (*e.g.*, product identifiers), and the use of globally cognizable addresses which lead to a specific object (*e.g.*, the use of URLs to uniquely identify the location of objects, as well as instructions for dealing with the object once it is retrieved).

B. Overview Of Applicant's Admissions And Examiner's Statements Regarding The Claims And The State Of The Art

While the claims of the '506 patent naturally are the primary focus of this Request, the methods and apparatus described (to some extent) in the patent's specification, as well as the prosecution history of the patent and the text of related patents provide important context for those claims. Thus, this section summarizes the '506 patent's description of its alleged invention, as well as Examiner's (and Applicant's) statements regarding the basis for allowability of the challenged claims, as well as other statements by Applicant regarding the scope of the prior art and of the claims at issue.

Requester summarizes in the following Subparagraphs, and includes for reference as Exhibits 2-3 and 13-15, copies of the following documents, which include documents that contain admissions made by Applicant and statements from the Examiner made during prosecution of the '506 patent, statements from the owner of the patent during the WebX

Litigation, and patents that are related to the '506 patent.⁴ These exhibits are not being used in this Request as the basis for additional proposed rejections, but are included to inform the Applicant's view of the scope of the claims.

- Exhibit 2 '506 patent file history;
- Exhibit 3 WebXchange's Opening Claim Construction Brief in the WebX Litigation ("WebX Claim Constructions");
- Exhibit 13 United States Provisional Patent Application No. 60/006,634 (the "'634 provisional application");
- Exhibit 14 United States Patent No. 5,778,178 (the "'178 patent"); and
- Exhibit 15 United States Patent No. 6,212,556 (the "'556 patent").

**1. Examiner Stated That Applicant's Claims Were
Allowable Based On Specific Added Limitations**

The claims that issued in the '506 patent were not originally filed with the '506 patent application. On three separate occasions, Applicant cancelled all then-pending claims and submitted new claims, first in response to a non-final rejection issued on August 26, 2004 (Exh. 2, '506 patent file history, August 26, 2004 Office Action, Exh. Pgs. 161-167),⁵ then again in response to final rejections issued on March 7, 2005 (*id.*, March 7, 2005 Office Action, Exh. Pgs. 179-198), and October 12, 2006 (*id.*, October 12, 2006 Office Action, Exh. Pgs. 215-222). The issued claims are amended claims that were originally submitted in response to this third rejection, in an amendment dated March 7, 2007 (*id.*, March 7, 2007 Amendment, Exh. Pgs. 225-231). The Examiner, in an Office Action dated April 2, 2007,

⁴ In citing to these references, Requester does not admit that Applicant's priority claims to related applications are proper.

⁵ For the Examiner's convenience, Exhibit 2 has been paginated by Requester, as certain portions of the '506 patent file history do not have page numbers. Thus, '506 patent file history citations to "Exh. Pg. ____" are to the page numbers created by Requester for the Exhibit.

stated that all of these claims, as filed, were not allowable, as they were anticipated by the cited prior art:

Claims 88-107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popp et al, U.S. pat. No. 6,249,291. [SIC]

(*Id.*, April 2, 2007 Office Action, Exh. Pg. 249.)

The Examiner explained in detail the reasons why Claims 88-92 were unpatentable over Popp, and further stated that the remaining claims were similarly unpatentable, with the exception of Claim 101:

Per claims 93-100, it is noted that Popp's disclosure encompass [sic] all claim limitations.

Claims 102-107 are similar in scope than that of claims 88-100.

Allowable Subject Matter:

3. Claim 101 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(*Id.*, Pgs. 250-251.)⁶

Then-pending claim 101 – the only claim not expressly rejected in the April 2, 2007 Office action – read as follows:

101. (New) The method of claim 88, further comprising:

associating an object identity with information entries and attributes, wherein the object identity represents a networked object;

storing said information entries and said attributes in a virtual information store; and

assigning a unique network address to said object identity.

(*Id.*, March 7, 2007 Amendment, Pg. 3, Exh. Pg. 227.)

⁶ Emphases added throughout this request.

In response to the April 2, 2007 Office action, Applicant introduced the limitations from then-pending claim 101 (above) into each of the then-pending independent claims, to overcome the rejection of these claims as anticipated. (*Id.*, September 7, 2007 Amendment, Exh. Pgs. 268-274.)

Below is a comparison of the then-pending claim 88, which the Examiner rejected, with the amended claim 88, which was allowed, and which issued as '506 patent, claim 1:

Claim 88 (Rejected as Anticipated):	Claim 88 (as Amended by Applicant):
<p>88. (New) A method for providing a service over a digital network, the method comprising:</p> <p>sending first display information from a first computer system to a user device, wherein the first display information includes a control associated with a commercial service;</p> <p>accepting a first signal in response to a user input to activate the control;</p> <p>initiating, in response to the first signal, communication between the user device and a second computer system;</p> <p>using the second computer system for sending second display information to the user device, wherein the second display</p>	<p>88. (New) A method for providing a service over a digital network, the method comprising:</p> <p>sending first display information from a first computer system to a user device, wherein the first display information includes a control associated with a commercial service;</p> <p>accepting a first signal in response to a user input to activate the control;</p> <p><i>associating an object identity with information entries and attributes, wherein the object identity represents a networked object;</i></p> <p><i>storing said information entries and said attributes in a virtual information store;</i></p> <p><i>assigning a unique network address to said object identity;</i></p> <p>initiating, in response to the first signal, communication between the user device and a second computer system;</p> <p>using the second computer system for sending second display information to the user device, wherein the second display</p>

Claim 88 (Rejected as Anticipated):	Claim 88 (as Amended by Applicant):
information includes a list of at least one commercial service;	information includes a list of at least one commercial service;
accepting a second signal in response to a user input to select a commercial service from the list; and	accepting a second signal in response to a user input to select a commercial service from the list; and
completing a commercial transaction relating to the selected commercial service.	completing a commercial transaction relating to the selected commercial service.

Following Applicant's amendment, in which Applicant added the above-highlighted limitations to all the independent claims, and withdrew the one dependent claim containing those limitations, the Examiner granted all the resulting claims. The Notice of Allowance included no discussion of the existence or non-existence of these additional limitations in the prior art. (*Id.*, September 11, 2007 Notice of Allowance, Exh. Pgs. 281-292.)

2. Applicant's Admissions In The WebX Litigation

During the pending litigation of the '506 patent in the District of Delaware, the purported patent owner, WebXchange, Inc. ("WebXchange"), has filed documents seeking certain claim constructions. WebXchange's Opening Claim Construction Brief, filed October 29, 2008 in the WebX Litigation, includes attachments documenting WebXchange's proposed construction of claim terms used in the '506 patent, and is attached as Exhibit 3 to this Request. For ease of reference, WebXchange's proposed constructions for '506 patent claim terms are listed in the table below. Where WebXchange's proposed constructions of '506 patent claim terms relies on its proposed construction of terms that appear only in claims of a related patent (*e.g.*, the '178 patent, Exhibit 14, and the '556 patent, Exhibit 15), those terms and proposed constructions are included, as well.

Claim Terms	WebXchange's Proposed Construction in the WebX Litigation
<i>'556 patent</i>	
Object routing	Providing an information channel for identifying and accessing an object.
<i>'506 patent</i>	
Associating an object identity with information entries and attributes, wherein the object identity represents a networked object; storing said information entries and said attributes in a virtual information store; assigning a unique network address to said object identity	Individual terms are construed herein; no further construction necessary.
Commercial service	Ordinary meaning; no construction necessary.
Comple[t/e/-ing] a [commercial] transaction	Ordinary meaning; no construction necessary.
First computer system	Ordinary meaning; no construction necessary.
Information entries and attributes	Attributes are the characteristics of an object. Information entries are information corresponding to attributes.
Legacy (database or computing system)	Pre-existing (database or system)
Networked object	An object that exists in a network environment.
Object	Collection of information involved in a transaction.
Object router	That which performs object routing. [see proposed construction in '556 patent, above]
Second computer system	Ordinary meaning; no construction necessary.
Transaction	Any type of commercial or other type of interaction that a user may want to perform.
Unique network address	Ordinary meaning; no construction necessary.

Claim Terms	WebXchange's Proposed Construction in the WebX Litigation
User device	Ordinary meaning; no construction necessary.
Value-Added Network Switch	Software that switches to a transactional application in response to a user specification from a World Wide Web application, transmits a transaction request from the transactional application, and processes the transaction request.
Virtual information store	An information store that is temporarily created, and which contains information entries and attributes of an object.

3. Applicant's Admissions Regarding The State Of The Art

Applicant admitted in her application that many of the elements of the '506 patent claims existed in the prior art. Applicant also made a number of statements regarding supposed limitations of the prior art that, when viewed through the prism of known prior art such as Payne, below, fail to distinguish Applicant's claimed invention over the prior art. Thus, taking Applicant's admissions regarding what already existed in the prior art, coupled with examples of such prior art, such as Payne, it is clear that none of the "inventions" in Applicant's claims was novel at the time Applicant filed the application that issued into the '506 patent, or even when she filed the original provisional application to which the '506 patent claims priority.

a) Applicant Admits The Existence Of "Typical" Computers With Processors And Storage Capable Of Executing Instructions, As Well As A Display Device Capable Of Displaying Pages From A Web Browser

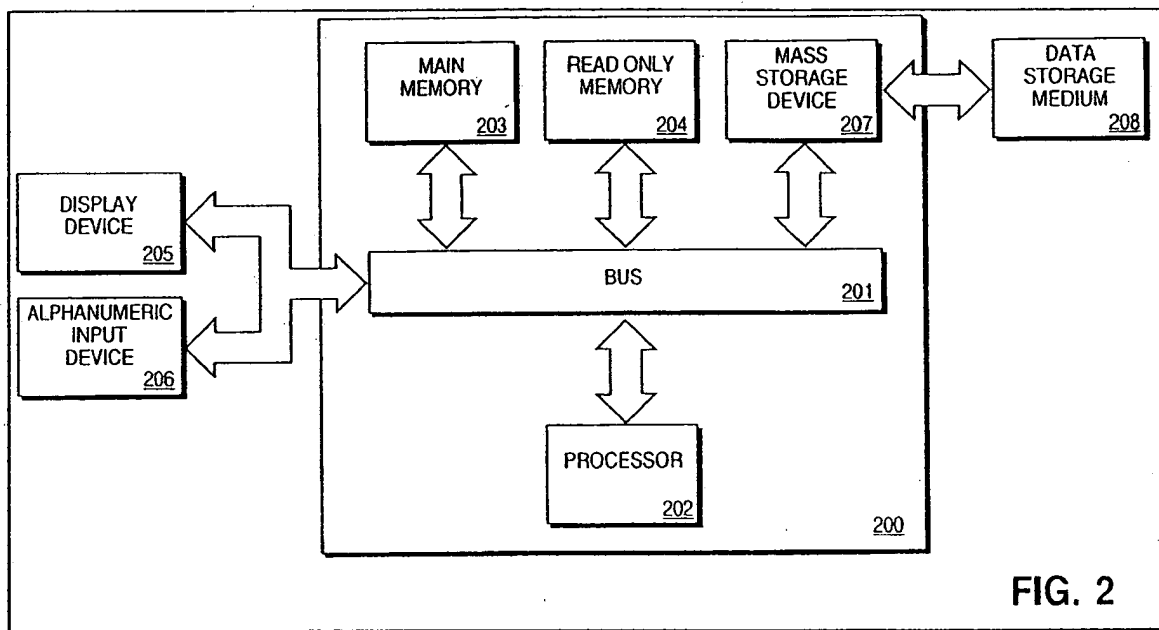
The first "element" of Applicant's claims is a user device, which in at least some claims consists of a storage medium, a processor, and a display device that has access to a

Web browser to display Web pages, Web controls and Web content. Each of these elements was already in existence at the time that Applicant filed her application, as seen below.

Applicant admits, for example, that the computer system shown in Figure 2 of the '506 patent, which shows, *e.g.*, a user device that includes a data storage medium, a processor, and a display device, was a "typical computer system."

FIG. 2 illustrates a **typical computer system** on which the **present invention** may be utilized.

('506 patent, Col. 3, lines 21-22.)



'506 patent – Fig. 2

Applicant also states that the "present invention is used "in" (see below) or "on" (see above) such a computer system, and consists, in the preferred embodiment, of software that is loaded on such a system "in a conventional manner." Thus, while Applicant did not expressly admit that such "typical" systems were prior art, she admitted that such a "typical" computer system itself was known, and is not part of her purported "invention."

FIG. 2 illustrates a typical computer system 200 in which the present invention operates. **The preferred embodiment of the present invention is implemented on an IBMTM Personal Computer manufactured by IBM Corporation of Armonk, N.Y.** Alternate embodiments may be implemented on a Macintosh.TM. computer manufactured by Apple.TM. Computer, Incorporated of Cupertino, Calif. It will be apparent to those of ordinary skill in the art that other alternative computer system architectures may also be employed.

In general, such computer systems as illustrated by FIG. 2 comprise a bus 201 for communicating information, a processor 202 coupled with the bus 201 for processing information, main memory 203 coupled with the bus 201 for storing information and instructions for the processor 202, a read-only memory 204 coupled with the bus 201 for storing static information and instructions for the processor 202, a display device 205 coupled with the bus 201 for displaying information for a computer user, an input device 206 coupled with the bus 201 for communicating information and command selections to the processor 202, and a mass storage device 207, such as a magnetic disk and associated disk drive, coupled with the bus 201 for storing information and instructions. A data storage medium 208 containing digital information is configured to operate with mass storage device 207 to allow processor 202 access to the digital information on data storage medium 208 via bus 201.

Processor 202 may be any of a wide variety of general purpose processors or microprocessors such as the PentiumTM microprocessor manufactured by IntelTM Corporation or the MotorolaTM 68040 or Power PCTM brand microprocessor manufactured by manufactured by MotorolaTM Corporation. It will be apparent to those of ordinary skill in the art, however, that other varieties of processors may also be used in a particular computer system. Display device 205 may be a liquid crystal device, cathode ray tube (CRT), or other suitable display device. Mass storage device 207 may be a conventional hard disk drive, floppy disk drive, CD-ROM drive, or other magnetic or optical data storage device for reading and writing information stored on a hard disk, a floppy disk, a CD-ROM a magnetic tape, or other magnetic or optical data storage medium. Data storage medium 208 may be a hard disk, a floppy disk, a CD-ROM, a magnetic tape, or other magnetic or optical data storage medium.

In general, processor 202 retrieves processing instructions and data from a data storage medium 208 using mass storage device 207 and downloads this information into random access memory 203 for execution. Processor 202, then executes an instruction stream from random access memory 203 or read-only memory 204. Command selections and information input at input device 206 are used to direct the flow of instructions executed by processor 202. Equivalent input device 206 may also be a pointing device such as a conventional mouse or trackball device. The results of this processing execution are then displayed on display device 205.

The preferred embodiment of the present invention is implemented as a software module, which **may be executed on a computer system such as computer system 200 in a conventional manner. Using well known techniques, the application software of the preferred embodiment is stored on data storage medium 208 and subsequently loaded into and executed within computer system 200.** Once initiated, the software of the preferred embodiment operates in the manner described below.

(*Id.*, Col. 4, line 21 – Col. 5, line 17.)

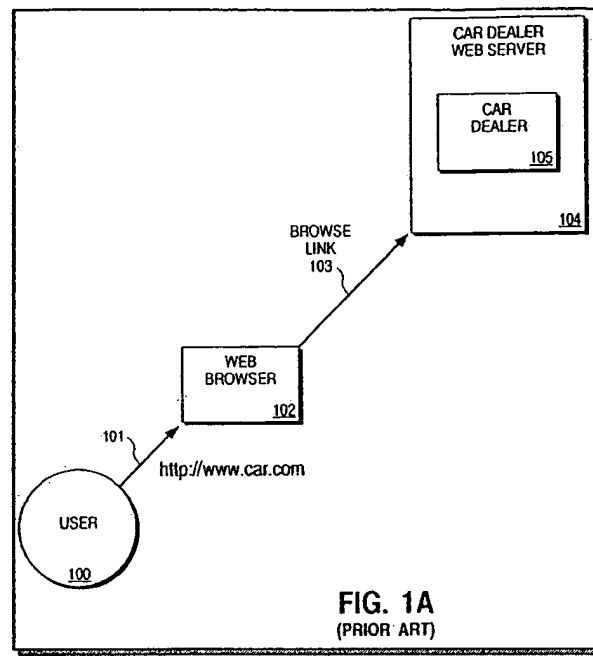
Applicant further admits that the concept of connecting a user device to a Web browser was known in the prior art:

FIG. 1A is an illustration of a **current user's browse capabilities on a network via a network browser.**

(‘506 patent, Col. 3, lines 16-17; *see also* Fig. 1A, below.)

b) Applicant Also Admits That Prior Art Systems Owned By Different Corporate Entities Could Interact With A User In Real-Time To Perform Transactions

Applicant further admits not only that Web browsers were known in the prior art, but that a URL could be used in a prior art Web browser to access a specific Web page, and that Web pages could even contain links that allow a user to connect to other Web pages.

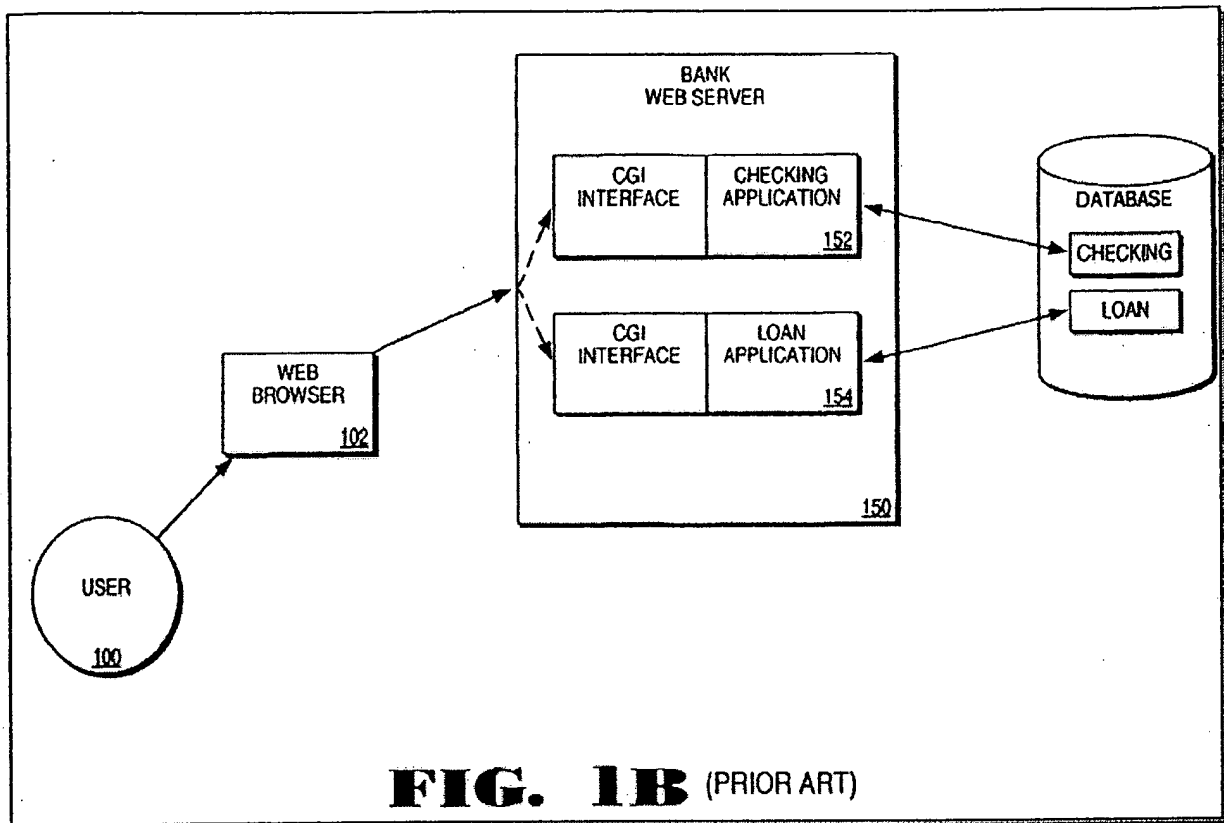


‘506 patent – Fig. 1A

FIG. 1A illustrates typical user interactions on the Web today. User 100 sends out a request from Web browser 102 in the form of a universal resource locator (URL) 101 in the following manner: `http://www.car.com`. URL 101 is processed by Web browser 102 that determines the URL corresponds to car dealer Web page 105, on car dealer Web server 104. Web browser 102 then establishes browse link 103 to car dealer Web page 105. User 100 can browse Web page 105 and select “hot links” to jump to other locations in Web page 105, or to move to other Web pages on the Web.

(*Id.*, Col. 1, lines 49-58.)

Applicant admits not only that a Web page might contain links to another Web page (see above), but also that such other Web pages could have CGI application scripts allowing a user to perform transactions on the Web (*see, e.g.*, Fig. 1B, below; *see also* ‘506 Patent, Col. 1, line 65 – Col. 2, line 8, quoted below). Thus, using Applicant’s admitted prior art, simply by clicking on a “hot link” on a first Web site on a network server owned by a first corporate entity, a user(’s computer) could interact with an application on a second Web site on a network server owned by a separate corporate entity.



‘506 patent – Fig. 1B

Applicant further admits that using these CGI application scripts, it is possible for a user not only to have a one-way “read-only” communication with a Web site, but also to have a two-way communication with the computer(s) running the CGI application(s):

Under limited circumstances, a user may have access to two-way services on the Web via Common Gateway Interface (CGI) applications. CGI is a standard interface for running external programs on a Web server. It allows Web servers to create documents dynamically when the server receives a request from the Web browser. When the Web server receives a request for a document, the Web server dynamically executes the appropriate CGI script and transmits the output of the execution back to the requesting Web browser. This interaction can thus be termed a “two-way” transaction.

(*Id.*, Col. 1, line 65 – Col. 2, line 8.)

CGI application is customized for a particular type of application or service.

For example, as illustrated in FIG. 1B, **user 100 may access bank 150's Web server and attempt to perform transactions on checking account 152 and to make a payment on loan account 154.** In order for user 100 to access checking account 152 and loan account 154 on the Web, **CGI application scripts must be created . . .**

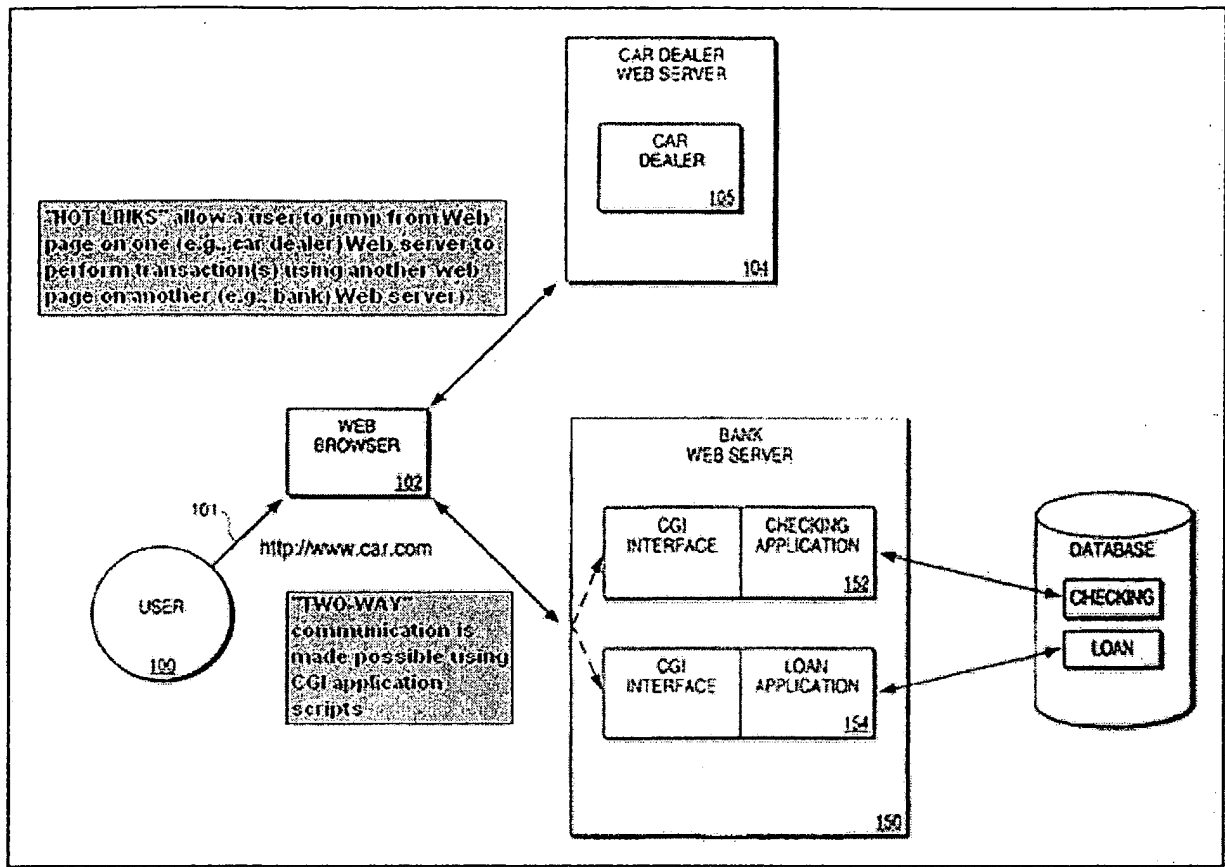
(*Id.*, Col. 2, lines 9-17.)

Even in seeking to distinguish CGI, Applicant admits that CGI application scripts provide users with the ability to access the real-time services of a merchant over the Web. Applicant further admits that CGI application scripts may be used to access multiple services, though Applicant states that the solution is not viable for “merchants with a large number of services.”

CGI application scripts must be created for each account, as illustrated in FIG. 1B. **The bank thus has to create individual scripts for each of its services to offer users access to these services. User 100 can then interact in a limited fashion with these individual applications.** Creating and managing individual CGI scripts for each service is not a viable solution for merchants with a large number of services.

(*Id.*, Col. 2, lines 16-23.)

Taking together the admissions made by Applicant about the prior art, then, Applicant admits that a system existed in the prior art where a user could access a Web page associated with some commercial services provided by one corporate entity (*e.g.*, a car dealer) on its network (*id.*, Fig. 1a; *see also* Col. 1, lines 49-58), then click on a “hot link” on that Web page to reach a second Web site. (*Id.*)



Combination of Admitted Prior Art Elements in '506 patent

Applicant further admitted that a user could use a prior art system to access commercial services from a second Web site operated by another corporate entity (e.g., a bank) on that corporate entity's network, where those commercial services might involve locating, accessing and running a CGI application script to complete a commercial transaction, such as a loan application. (*Id.*, Fig. 1b; *see also* Col. 1, line 65 – Col. 2, line 8; Col. 2, lines 9-17.) Further Applicant admits that at least one of the computers running the Web sites could engage in two-way communications with the user by employing CGI application scripts to perform a transaction, or even multiple transactions. (*Id.*)

C. Detailed Description Of The Prior Art

Applicant sought to distinguish the admitted prior art in two primary ways. First, she suggested that prior art Web browsing was typically “one-way,” or “browse only.”

This interaction is typically a browse-only interaction. Under limited circumstances, the user may be able to fill out a form on car dealer Web page 105, and e-mail the form to car dealer Web server 104. This interaction is still strictly a one-way browse mode communications link, with the e-mail providing limited, deferred transactional capabilities.

(*Id.*, Col. 1, lines 59-64.)

This statement does not apply to the use of CGI application scripts in concert with Web browsers, which Applicant admits were known in the prior art. These systems, examples of which are in the prior art discussed below, do provide two-way transactional capabilities (see description of Applicant’s admissions regarding CGI Application Scripts, Section 0, Paragraph B, Subparagraph 3, above). Just as the bank in Applicant’s example could run CGI applications to complete a transaction in real-time, so, too, could a car dealer. Both of the entities in Applicant’s prior art examples above, then, could have two-way real-time communication with a user to complete a commercial transaction. In fact, one of ordinary skill in the art would understand that a user could have real-time interaction with both entities *at the same time*, simply by having two browser windows open and executing CGI application scripts with each entity.

Applicant also attempts to distinguish these prior art CGI application scripts as not providing real-time transactional capability:

CGI application scripts must be created for each account, as illustrated in FIG. 1B. The bank thus has to create individual scripts for each of its services to offer users access to these services. User 100 can then interact in a limited fashion with these individual applications. **Creating and managing**

individual CGI scripts for each service is not a viable solution for merchants with a large number of services.

As the Web expands and electronic commerce becomes more desirable, the need increases for robust, real-time, bi-directional transactional capabilities on the Web. **A true real-time, bi-directional transaction would allow a user to connect to a variety of services on the Web, and perform real-time transactions on those services. For example, although user 100 can browse car dealer Web page 105 today, the user cannot purchase the car, negotiate a car loan or perform other types of real-time, two-way transactions that he can perform with a live salesperson at the car dealership.**

(*Id.*, Col. 2, lines 21-35.)

Nothing in Applicant's claims, however, requires performing a transaction in real-time, or performing a transaction that involves a "large number of services." Second, and equally important, even if Applicant were to (erroneously) argue that real-time transactional capability should be read into the claims, Applicant admits that CGI application scripts provided the prior art with real-time transactional capabilities. Specifically, links contained on a Web page displayed on a user's screen using a Web browser can be used to activate CGI application scripts providing two-way communications between a user and a "remote" computer that runs the application (*e.g.*, a merchant computer, such as a car dealer or bank) – thus the Applicant's admitted prior art provided the very type of real-time transactions that Applicant said could not be performed by the prior art.

Thus, the very CGI application scripts Applicant admits were prior art could be used as part of a real-time transaction with a bank to obtain a car loan, or could be used by a car dealership to allow a user to purchase a car online.

The discussion of the prior art, below, demonstrates that some of the very systems that Applicant admits were prior art (*e.g.*, systems using "CGI application scripts," "web

browsers,” “hot links,” etc.) allow users to engage in two-way communications with multiple merchant computers, each with multiple applications. These prior art systems, then, are capable of performing a three-way real-time transaction, with communication between a user’s computer and a first computer on a first corporate network, communication between a user’s computer and a second computer on a second corporate network, and communication between the first and second computer systems.

In fact, as discussed in more detail below, several prior art references teach exactly that: namely, using Web browsers, CGI applications and two (or three)-way communication between a user’s computer and Web sites on corporate networks operated by different entities, such as one Web site providing merchant services (*e.g.*, a car dealer) and another Web site providing payment services (*e.g.*, a bank), providing the user with real-time transactional capabilities with multiple service providers.

1. **The Payne Prior Art**⁷

Performing commercial transactions using multiple computers, routing objects, and switching from Web pages to applications available on a corporate network via the World Wide Web were all known in the art at the time Applicant filed her first provisional application in November, 1995. United States Patent No. 5,715,314 (the “Payne patent”), entitled “Network Sales System,” which issued to Andrew C. Payne *et al.* on February 3, 1998, claims priority to an application filed on October 24, 1994.⁸ Payne discloses a system for connecting a user device to other computers for the purpose of performing transactions

⁷ Payne was cited, but not relied upon by the Examiner during prosecution of the ‘506 patent. See Paragraph IV.B.SNQ 1, below.

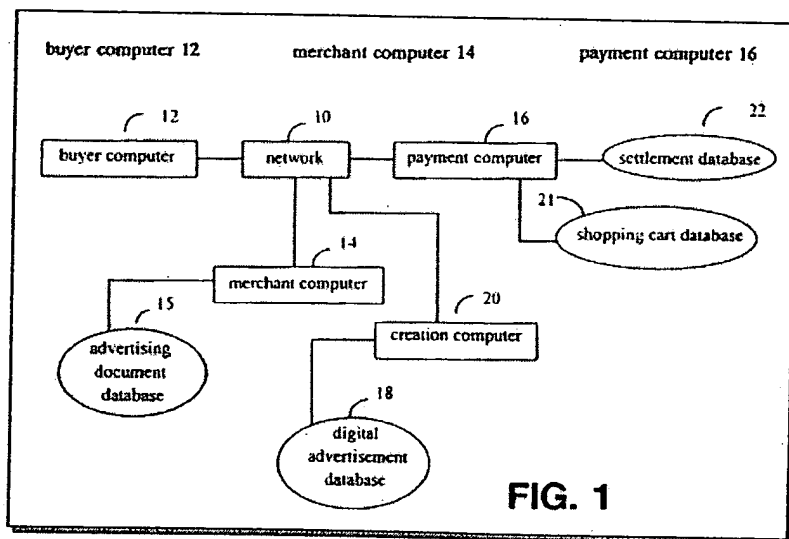
⁸ All citations to Payne throughout this request reflect matter that was initially presented in the application which issued into Payne, U.S. Pat. Appl. No. 328,133, filed October 24, 1994.

and accessing objects, which can then be transmitted to the user over the network. Payne is assigned to Open Market, Inc.

Some elements of the system disclosed by Payne are, in one embodiment,

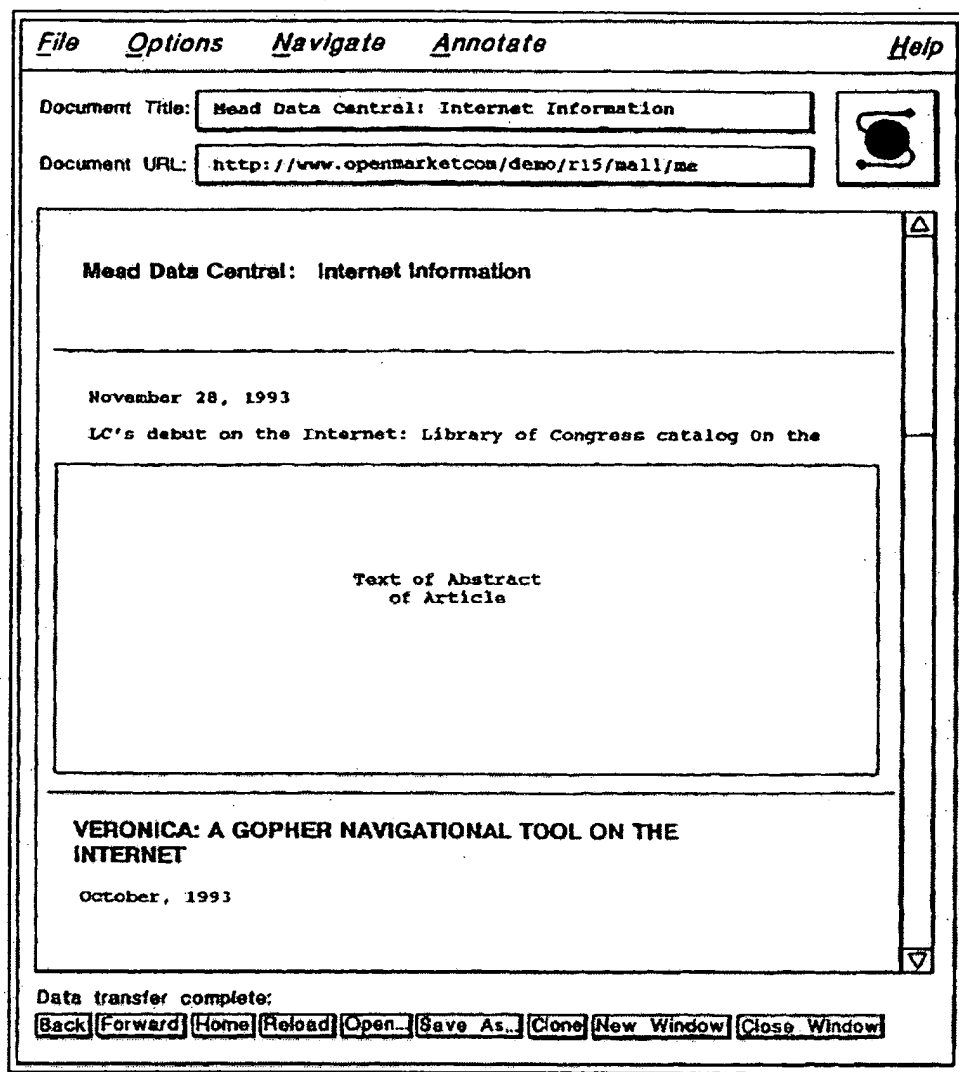
- 1) a buyer computer (12),
- 2) a merchant computer (14) which is connected to a creation computer (20) for generation and/or maintenance of a "store" of information which may include advertisements describing objects (e.g., digital versions of newspaper articles), combined with information about the objects (e.g., descriptive information, including prices), and
- 3) a payment computer (16), which itself contains stores of information relating to customer accounts and orders.

These computers are all interconnected by a network, such as the Internet. (Payne, Col. 4, lines 35-45; Fig. 1.)



Payne – Fig. 1

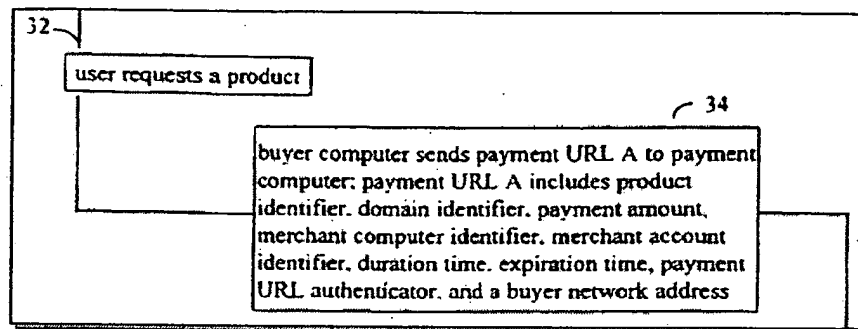
In order to purchase a given object, a buyer selects that object from a list of objects presented in an advertising document, which is accessed by selecting a control option from a Web page document the merchant computer sends to the user. The Web page is displayed on the user's computer (buyer computer) in a Web browser, such as the Mosaic Web browser. (*Id.*, Fig. 5; *see also id.*, Col. 10, lines 9-20, (discussing use of HTML forms in Mosaic 2.0.))



Payne – Fig. 5

Once the user selects the object he desires to purchase and activates the associated link, or Web page control, the buyer computer sends a request to a third computer, called the payment computer, which in some embodiments may be operated on a separate corporate network owned by a different business entity than the one operating the merchant computer (Payne, Col. 4, lines 38-43). A unique URL identifier specifically identifying the name (product identifier) and location (domain identifier) of the object requested, as well as

important attributes such as price and merchant information, as well as other information, is presented to the payment computer by the buyer computer. (*Id.*, Fig. 2a)



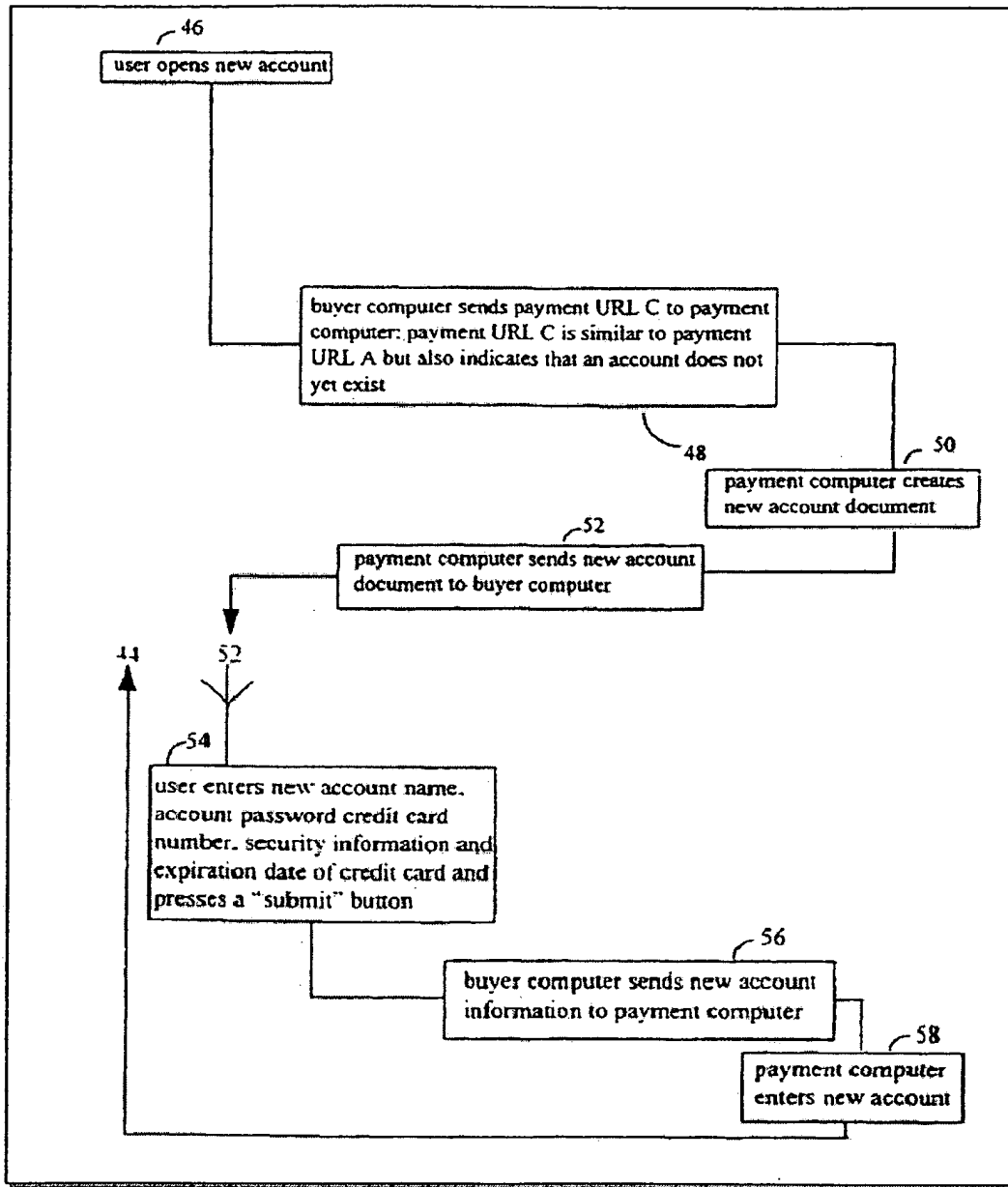
Payne – Fig. 2a (selected portion)

In response, the payment computer allows the user either to open an account, or to finalize the transaction immediately by entering a user name and password. (*Id.*, Fig. 6)

The screenshot shows a web browser window with a menu bar containing 'File', 'Options', 'Navigate', 'Annotate', and 'Help'. Below the menu bar, there are two input fields: 'Document Title:' with the value 'Open Market Payment' and 'Document URL:' with the value 'http://payment.opensmarket.com/ben/nph-payment'. To the right of these fields is a circular icon with a stylized 'S' inside. The main content area of the browser displays the title 'Open Market Payment' followed by the text 'You have selected an item that requires payment'. Below this, it lists 'Merchant: Test Merchant', 'Description: Mead Data Central Article', and 'Amount: 2.85 (US currency)'. A paragraph of text follows, explaining that users with an account should click 'continue' and those without should establish one. At the bottom, there are two buttons: 'Open' with the text 'an account on-line' and 'Continue' with the text 'with payment transaction.'

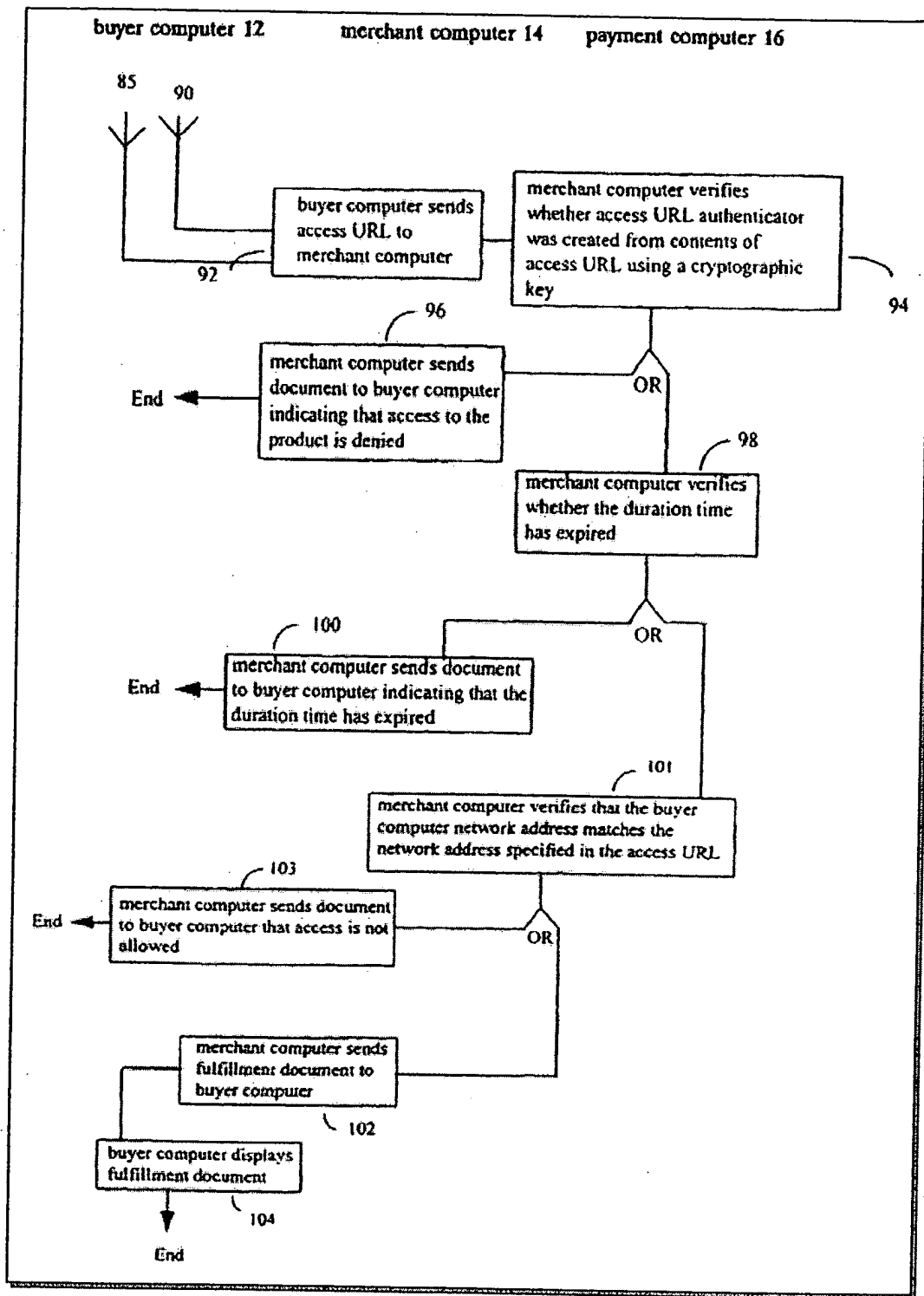
Payne – Fig. 6 (selected portion)

If the user chooses to open an account, the payment computer then communicates with the user to collect the information necessary to allow the buyer to open an account, and establish a payment method (*e.g.*, a credit card) used to satisfy obligations incurred against the account; once this is completed, the new account is created. (*See Payne*, Figs. 2C-2D.)



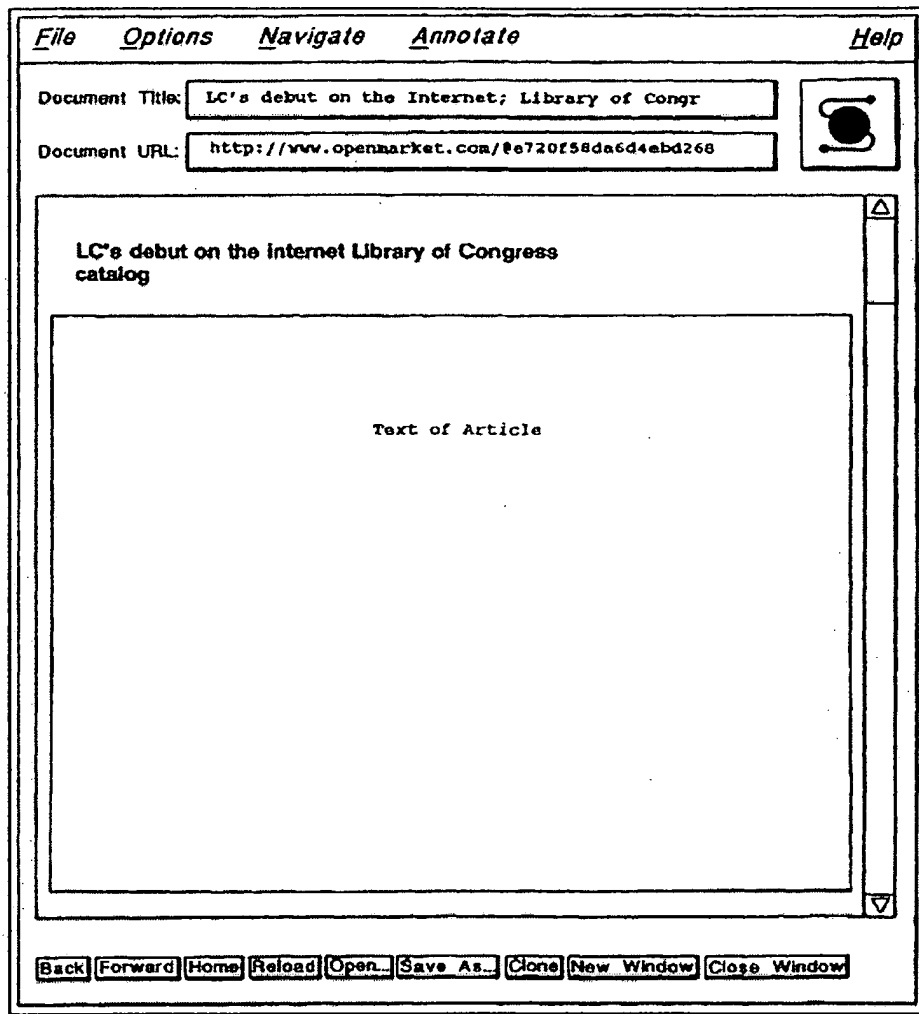
Payne – Figs. 2C, 2D (selected portion)

Once a new account is created, and the user is validated (*see* Payne, Fig. 8) as having a valid account with sufficient credit, the payment computer directs an “access URL” back to the buyer computer, which then submits this access URL and communicates with the merchant computer to perform fulfillment of the transaction. (*Id.*, Figs. 2H, 2I.)



Payne - Figs. 2H, 2I (selected portion)

The merchant computer performs fulfillment of the buyer's request by sending a fulfillment document to the buyer computer, which the buyer computer then sends to the buyer's monitor for display. (*Id.*, Fig. 10.)



Payne – Fig. 10

The patent owner, WebX, has proposed construing the term “object” in the WebX Litigation, as a “collection of information involved in a transaction.”⁹ Particularly in view of

⁹ Requester does not admit that any interpretations of any of the claims or constructions of claim terms that may be set forth herein would also be proper in the Litigations or in other court proceedings that do not apply the “broadest reasonable interpretation” standard applied during reexamination. See MPEP § 2258.I.G. Rather, Applicant is in no position to argue

this proposed construction, each of the documents disclosed in Payne, as well as the products being ordered, may be considered objects.

These objects, in turn are “routed” over a network (10). WebX has proposed defining “object routing,” as “providing an information channel for identifying and accessing an object.” Particularly in view of this proposed construction, each of the “objects” mentioned above, which exist on computers spread over the World Wide Web, is necessarily “routed” over that network (10) (e.g., a path to/for these documents and digital products is identified). The network is the common link between the buyer computer and merchant computer, between the buyer computer and payment computer, and, in some embodiments, between the payment computer and merchant computer. In disclosing such a network of unrelated computers interacting with one another over the Internet, then, Payne explicitly or inherently discloses object routing, as the system disclosed by Payne at least inherently provides “an information channel for identifying and accessing an object.”

In addition, Payne discloses switching from requests to applications, and further states that switching is inherent in all but the most basic functions on the Internet:

An unavoidable property of public computer networks is that they are comprised of switching, transmission, and host computer components controlled by many individuals and organizations.

(‘519 Application, Pg. 3, lines 11-14.)

A Network Payment System

A network payment system 300 as shown in Figure 13, employs a packet-switched network 69 to interconnect a plurality of client computers 70 and 71, and a plurality of payment computers such as 72, each payment computer having

that these constructions it has proposed are broader than the broadest reasonable construction.

an account database 73, a settlement database 74, an authorized address database 75, a sender credential database 76, a financial system interface 77, and a real-time authorization interface 78.

(*Id.*, Pg. 19, lines 15-23.)

A more detailed discussion of some of the key elements of Payne follows.

a) **Payne Teaches Using At Least Two Separate Computer Systems To Send A User Display Information And Perform Transaction(S) In Response To User Inputs**

Payne, in one embodiment, discloses sending display information from a “merchant computer” owned by a first corporate entity to a user’s device, called a “buyer computer.”

A user at a buyer computer asks to have advertisements displayed, and the **buyer computer requests advertisements from a merchant computer, which sends the advertisements to the buyer computer.**

(Payne, Col. 1, lines 24-27.)

With reference to FIG. 2, a purchase transaction begins when a **user at buyer computer 12 requests advertisements (step 24) and buyer computer 12 accordingly sends an advertising document URL (universal resource locator) to merchant computer 14 (step 26). The merchant computer fetches an advertising document from the advertising document database (step 28) and sends it to the buyer computer (step 30).** An example of an advertising document is shown in FIG. 5. Details of URLs and how they are used are found in the microfiche Appendix G.

(*Id.*, Col. 5, lines 16-25) (*See* Payne, Fig. 5, above.)

Payne discloses that the display information includes a control allowing the user to purchase a product (control associated with a commercial service):

The user browses through the advertising document and **eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34).**

(*Id.*, Col. 5, lines 27-30) (*See also* ‘519 Application, Pg. 11, lines 20-24; Fig. 2.)

The user then selects a product from the display information, and the buyer computer sends a signal to a payment computer.

The user browses through the advertising document and **eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34).**

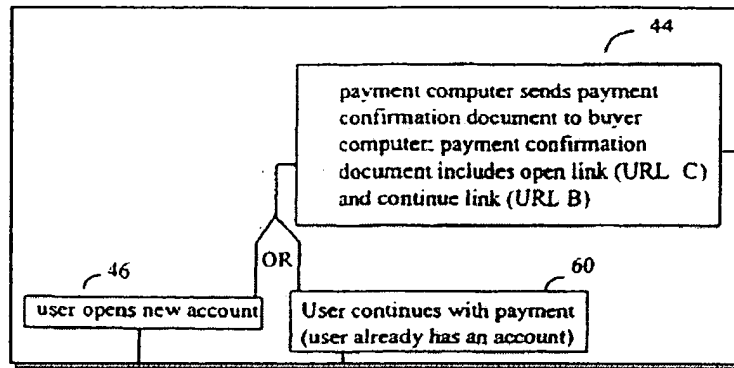
(Payne, Col. 5, lines 27-30; *see also id.*, Col. 3, lines 29-34; Col. 5, lines 48-56; '519 Application, Pg. 11, lines 20-24; Pg. 18, lines 13-24.)

In response, the user request is directed to a "payment computer," which communicates with the buyer computer, providing additional display information that offers the user a choice of transactions to perform, represented by two controls. The document sent from the payment computer includes a first control for opening an account and a second control that allows the user to complete a purchase transaction to receive a product, including performing a real-time transaction, and even performing real-time fulfillment for that transaction (*e.g.*, when the user purchases digital content that is available online.)

[P]ayment computer sends a payment confirmation document to the buyer computer, the **payment confirmation document** including an **"open" link and a "continue" link (step 44).**

An example of a confirmation document is shown in FIG. 6. The confirmation document asks the user to click on a **"continue" button if the user already has an account with the payment computer, or to click on an "open" button if the user does not already have an account and wishes to open one."**

(Payne, Col. 6, lines 1-14; *see also id.*, Figs. 2C, 6.)



Payne, Fig. 2C (selected portion)

If you have an Open Market account click on "continue" below and you will be prompted for your account name and password. If you do not have an account, you can establish one on-line and return to this page to continue your purchase.

an account on-line

with payment transaction.

Payne, Fig. 6 (selected portion)

Clicking on the first link, "Open," leads the user to complete a commercial transaction, namely opening an account:

If the user clicks on the "open" button (step 46), the buyer computer sends payment URL C to the payment computer (step 48), payment URL C being similar to payment URL A but also indicating that the user does not yet have an account. The payment computer creates a new account document (step 50) and sends it to the buyer computer (step 52). An example of a new account document is shown in FIG. 7. When the user receives the new account document he enters the new account name, an account password, a credit card number, the credit card expiration date, and security information such as the maiden name of the user's mother (step 54), and presses a "submit" button (not shown in FIG. 7). The buyer computer sends the new account information to the payment computer (step 56), which enters the new account in the settlement database (step 58).

(Payne, Col. 6, lines 15-31.)

Once the user has established an account, or if the user already has an existing account, the user may select the "Continue" link to complete a (second) commercial transaction, namely payment for, and fulfillment of, a product order.

If the user clicks on the "continue" button (step 60), the buyer computer sends payment URL B to the payment computer (step 62), payment URL B being similar to payment URL A but also indicating that the user already has an account. The payment computer then instructs the buyer computer to provide the account name and password (steps 64 and 66), and the buyer computer prompts the user for this information by creating an account name prompt (example shown in FIG. 8) and a similar password prompt. The user enters the information (step 68) and the buyer computer sends the account name and password to the payment computer (step 70).

The payment computer verifies whether the user name and password are correct (step 72). If they are not correct, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 74). Otherwise, the payment computer determines whether additional security is warranted, based on, e.g., whether the payment amount exceeds a threshold (step 73). If additional security is warranted, the payment computer creates a challenge form document and sends it to the buyer computer (step 75)

If the security information is correct, or if additional security was not warranted, the payment computer checks the settlement database to determine whether the user has unexpired access to the domain identifier contained in the payment URL (step 82). If so, the payment computer sends to the buyer computer a document providing an option either to repurchase or to use the previously purchased access (step 84). An example of such a document is shown in FIG. 9. The user can respond to the recent purchase query document by choosing to access the previously purchased document (step 85) or to go ahead and buy the currently selected product (step 86).

If the user chooses to access the previously purchased document, the buyer computer skips to step 92 (See below). If the user chooses to buy the currently selected product, the payment computer calculates an actual payment amount

that may differ from the payment amount contained in the payment URL (step 87). . . .

The access URL authenticator is a hash of other information in the access URL, the hash being defined by a key shared by the merchant and the operator of the payment computer. **The payment computer then records the product identifier, the domain, the user account, the merchant account, the end of duration time, and the actual payment amount in the settlement database (step 88).**

(*Id.*, Col. 6, line 32 – Col. 7, line 30.)

Fulfillment for this second transaction is performed by the merchant computer. Thus, while the payment computer provides display information to the user offering two different transaction options, the second of these transactions is performed utilizing interaction between the buyer computer and the merchant computer:

The payment computer then sends a redirect to access URL to the buyer computer (step 90), which sends the access URL to the merchant computer (step 92). The merchant computer verifies whether the access URL authenticator was created from the contents of the access URL using the cryptographic key (step 94). If not, the merchant computer sends a document to the buyer computer indicating that access to the product is denied (step 96).

Otherwise, the merchant computer verifies whether the duration time for access to the product has expired (step 98). This is done because the buyer computer can request access to a purchased product repeatedly. If the duration time has expired, the merchant computer sends a document to the buyer computer indicating that the time has expired (step 100). **Otherwise the merchant computer verifies that the buyer computer network address is the same as the buyer network address in the access URL (step 101), and if so, sends a fulfillment document to the buyer computer (step 102), which is displayed by the buyer computer (step 104)."**

(*Id.*, Col. 7, lines 31-50; *see also id.*, Figs. 2H and 2I, above.)

Payne shows an example of a fulfillment document sent by the merchant computer, in response to the user clicking on the "Continue" link on the display provided by the payment

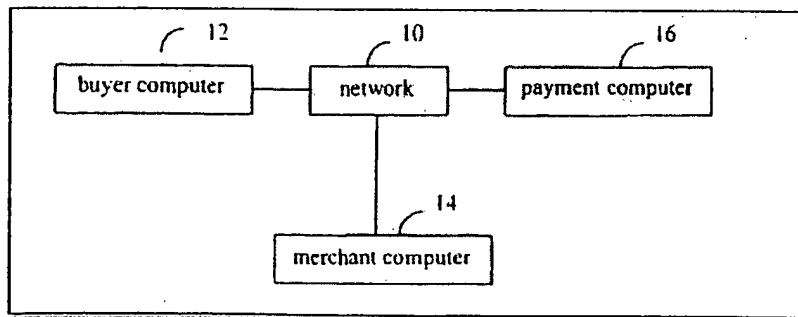
computer, and following the steps needed for fulfillment. The fulfillment document includes the text of an article requested and purchased by the user. (See Payne, Fig. 10, above.)

**b) Payne Discloses Exchanging Information
Between Computers Owned By Different
Business Entities To Complete A Transaction
And/or Achieving A Three-Way Transaction
Between The User And Two Separate Computer Systems**

Payne teaches having a merchant (first business entity) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment (second business entity) to the merchant. The merchant computer, then, is operated by a separate entity from the payment computer.

With reference to FIG. 1, a network sales system in accordance with the present invention includes a **buyer computer 12** operated by a user desiring to buy a product, a **merchant computer 14**, which may be operated by a merchant willing to sell products to the buyer or by a manager of the network sales system, a **payment computer 16** typically operated by a manager of the network sales system, and a **creation computer 20** typically operated by the merchant. The buyer, merchant, payment, and creation computers are all inter-connected by a computer network 10 such as the Internet.

(Payne, Col. 4, lines 35-45; *see also* '519 Application, Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)



Payne – Fig. 1 (selected portion)

The communication among these three computers is, in at least some embodiments, a three-way interaction, with the user communicating with both computers and the computers also communicating with each other.

The user then requests purchase of an advertised product, and the buyer computer sends a purchase message to the merchant computer. The merchant computer constructs a payment order that it sends to the payment computer, which authorizes the purchase and sends an authorization message to the merchant computer. When the merchant computer receives the authorization message it sends the product to the buyer computer.

(*Id.*, Col. 1, lines 27-35.)

c) **Payne Further Discloses An Object Router And/or Value-Added Network Switch, Including On A Second Computer.**

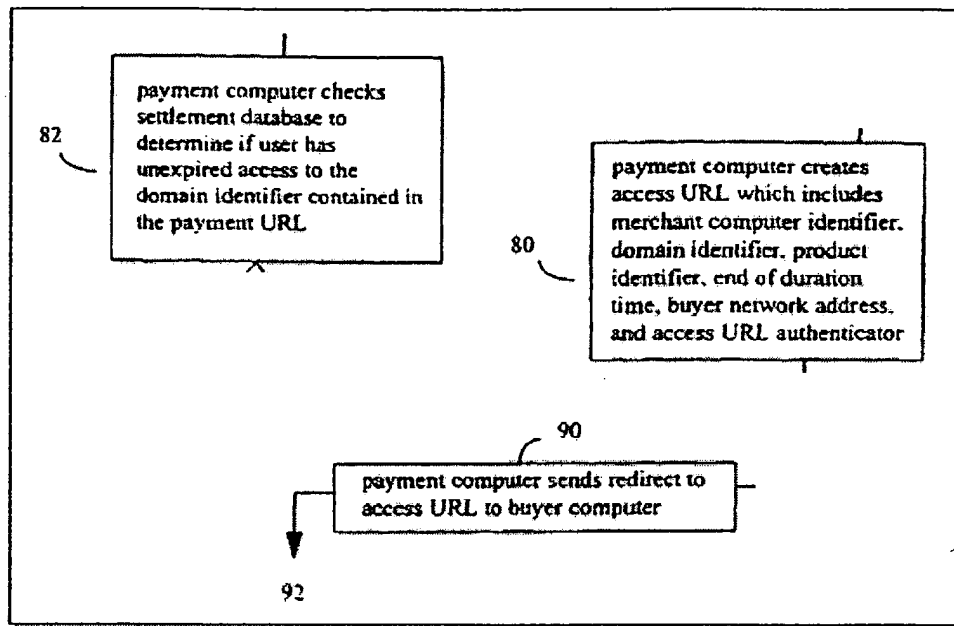
(1) **Object router**

Payne teaches a payment computer (second computer) that performs object routing, namely, it provides an information channel for identifying and accessing a collection of information involved in a transaction. (See WebX Claim Constructions, Exhibit 3, Pg. 49) :

Object routing	Providing an information channel for identifying and accessing an object.
Object	Collection of information involved in a transaction.
Object router	That which performs object routing.

WebX claim constructions for Object, Object Routing, and Object Router

Below are several examples of the payment computer serving as an information channel for “identifying and accessing” various “collection[s] of information involved in a transaction:”



Payne – Figs. 2F, 2G (selected portion)

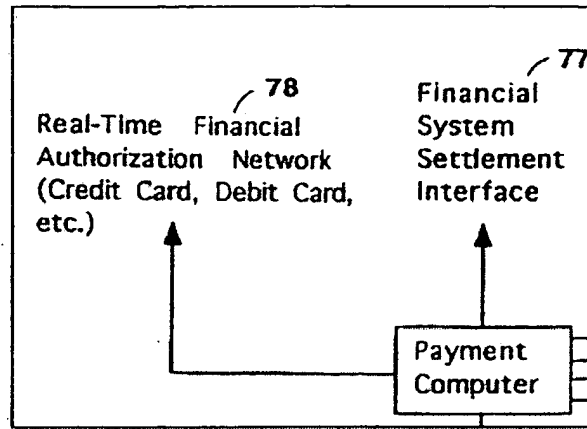
Target URL (url)
This is the real URL (usually on the merchant's machine) where the client will be redirected after the payment order is processed.

(Payne, App. E, page beginning with “Encoding payment orders in URLs,” Exh. Pg. 128.)

Requests are also sent by Payment Computer over Interface (78) to a “real-time financial authorization network,” thus obtaining the account authorization information involved in completing the transaction, which inherently requires “routing” a collection of information involved in the transaction:

A real-time authorization request message is sent at 86 to the external financial system over interface 78. If the external financial system approves authorization request 86, an authorization message is returned at 87. If request 86 is not approved, the external financial system sends a rejection message to the payment computer at 87.

(‘519 Application, Pg. 23, lines 1-7) (similarly, see Gifford, Col. 9, lines 14-20.)



‘519 Application/Gifford – Fig. 13 (selected portion)¹⁰

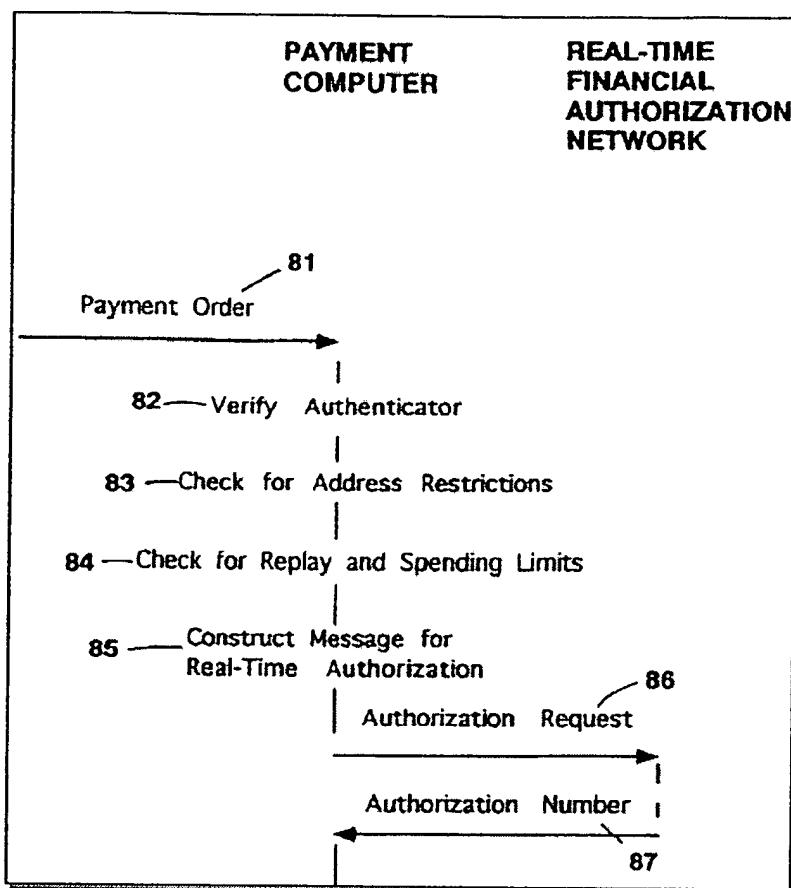
(2) Value-added network switch

In addition, Payne discloses a payment computer (second computer) that utilizes what Applicant calls a value-added network switch. Specifically, when a user activates a Web page control, a request is sent to switch from a Web application to a transactional application to process and act in response to a user request. (See WebX Claim Constructions, Exhibit 3, Pg. 51.) Payne discloses a number of different functions, or applications, that are performed in response to user input:

At 88 the payment order is committed to execution and is recorded in settlement database 74. Recorded with the payment order in database 74 are portions of authorization message 87 that show that the payment computer contacted the remote financial system. The amount of the payment order is added to running temporal spending records in database 73, and an authorization message is sent to the client computer at 90. The authorization message includes the payment order.

(‘519 Application, Pg. 24, lines 16-24; *see also* Fig. 14, below) (*similarly, see* Gifford, Col. 9, lines 53-61; Fig. 14.)

¹⁰ Throughout this request, the final figures from Gifford are used in lieu of the draft figures included with the original ‘519 Application. No new matter was added to the final figures.



'519 Application/Gifford – Fig. 14 (selected portion)

Payne also discloses, as an alternative, executing a computer program in response to a user input from a Web page, in lieu of performing a transaction using documents passed between computers:

In an alternate embodiment, document 22 is executed at 23 as a program. A program is defined as a set of instructions that can exhibit conditional behavior based upon user actions or the environment of the buyer computer. As is known to those skilled in the art, there are many techniques for representing programs as data. The program can be interpreted or it can be directly executed by the buyer computer. The program when executed will cause the buyer computer to interact with the user leading to the user purchase request 24, and the purchase message 25.

(*Id.*, Pg. 13, line 24 – Pg. 14, line 8) (*similarly, see* Gifford, Col. 5, line 60 – Col. 6, line 2.)

Additionally, the payment computer acts as a switch on the value-added network, as a switch is traditionally understood by those of skill in the art:

An unavoidable property of public computer networks is that they are comprised of **switching, transmission, and host computer components** controlled by many individuals and organizations.

(‘519 Application, Pg. 3, lines 11-14) (*similarly, see* Gifford, Col. 1, lines 63-66.)

A Network Payment System

A network payment system 300 as shown in Figure 13, employs a public packet-switched network 69 to interconnect a plurality of client computers 70 and 71, and a plurality of payment computers such as 72, **each payment computer having an account database 73, a settlement database 74, an authorized address database 75, a sender credential database 76, a financial system interface 77, and a real-time authorization interface 78.**

(*Id.*, Pg. 19, lines 15-23) (*similarly, see* Gifford, Col. 7, line 66 – Col. 8, line 6.)

Thus, Payne explicitly or inherently discloses a value-added network switch on the second computer system.

d) **Payne Discloses Compatibility With Legacy Databases And/or Legacy Computing Systems**

Payne teaches using an “existing financial system network” with information about existing accounts, which inherently would involve the use of existing, or “legacy” databases containing such information.

For wide acceptance the retail mechanism will need to be a logical evolution of **existing credit-card, debit-card, and Automated Clearing House facilities**, while for acceptance the wholesale mechanism will need to be an evolved version of corporate electronic funds transfer.

(‘519 Application, Pg. 2, lines 8-13) (*similarly, see* Gifford, Col. 1, lines 36-40.)

The prior art network based sales systems are not designed to allow users to use their **existing credit card and demand deposit accounts . . .**

(*Id.*, Pg. 2, lines 18-20) (*similarly, see* Gifford, Col. 1, lines 45-48.)

Accordingly, therefore, it is a primary objective of this invention to provide a user interactive network sales system in which the user can freely use **any merchant of choice and utilize existing financial instruments for payment.**

(*Id.*, Pg. 2, line 23 – Col. 3, line 2) (*similarly, see* Gifford, Col. 1, lines 50-53.)

A further object of the invention is to allow users in an untrusted network environment to **use conventional financial instruments without requiring modification to existing financial system networks.**

(*Id.*, Pg. 5, lines 12-15) (*similarly, see* Gifford, Col. 2, lines 46-49.)

The payment system accomplishes settlement by sending messages into an **existing financial system network.**

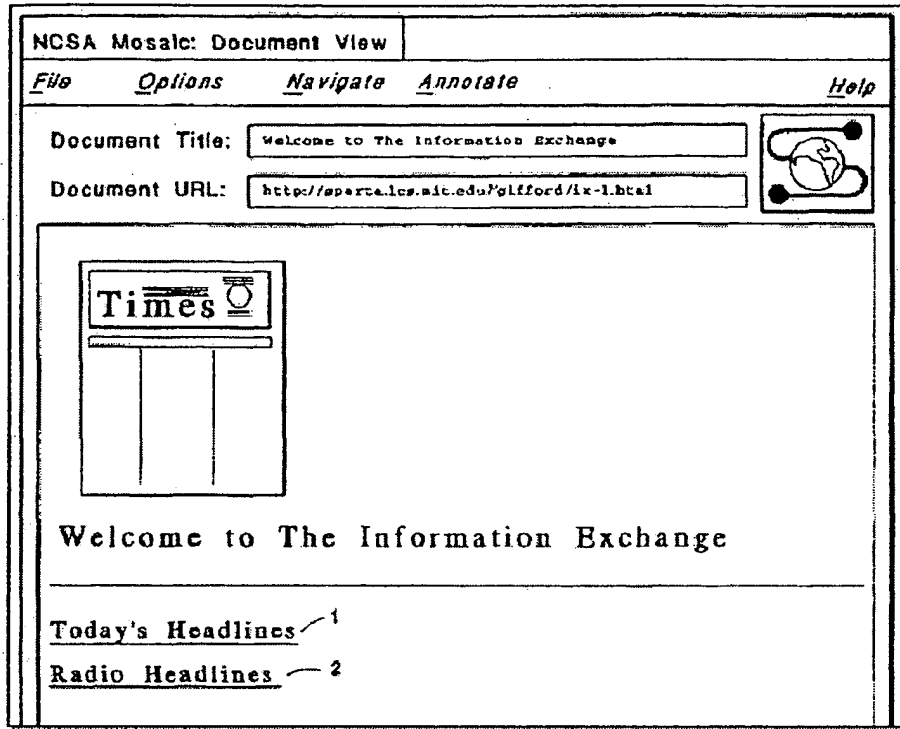
(*Id.*, Pg. 8, lines 3-5) (*similarly, see* Gifford, Col. 3, lines 46-48.)

Alternatively, in view of Payne's disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Payne's invention would have been used to access any conventional databases, *e.g.*, a "legacy" database.

e) **Payne Discloses The Use Of
Web Browsers, Web Pages And/or Web Page Controls**

The documents shown in the Payne patent, Figs. 5-14 (*See, e.g.*, Payne, Figs. 5, 6, 10, above) are similar to the Mosaic documents shown in the '519 Application (see below), and would have been understood by one of ordinary skill in the art to be Web pages, particularly in view of Payne's description of Mosaic HTML forms at Col. 10, lines 9-20, and in Appendix B.

The documents shown in the '519 Application, Figures 2-5 and 8-11 are shown as NCSA Mosaic pages. Mosaic was a popular Web browser, and would have been known as such to one of ordinary skill in the art. (See, e.g., '519 Application, Fig. 2, below.)



'519 Application/Gifford – Fig. 2

Thus, the various controls shown in the '519 Application, Figs. 2-5 and 8-11 are Web page controls. (See, e.g., Links 1 and 2 in Fig. 2, above.)

Similarly, the “open” and “continue” links shown, for example, in Payne, Fig. 6 are Web page controls:

Otherwise, the payment computer sends a payment confirmation document to the buyer computer, the **payment confirmation document** including an “open” link and a “continue” link (step 44).

An example of a **confirmation document** is shown in FIG. 6. The confirmation document asks the user to click on a “continue” button if the user already has an account with the payment computer, or to click on an “open” button if the user does not already have an account and wishes to open one.

(Payne, Col. 6, lines 5-15.)

Mosaic was a popular Web browser, so by including Mosaic Web pages with links as documents, Payne explicitly or inherently taught the user of a Web browser and web page controls.

Further, Payne teaches using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages (web page control):

The software architecture underlying the particular preferred embodiment is based upon the hypertext conventions of the World Wide Web. Appendix A describes the Hypertext Markup Language (HTML) document format used to represent digital advertisements, Appendix B describes the HTML forms fill out support in Mosaic 2.0, Appendix C is a description of the Hypertext Transfer Protocol (HTTP) between buyer and merchant computers, Appendix D describes how documents are named with Uniform Resource Locators (URLs”) in the network of computers, and Appendix E describes the authentication of URLs using digital signatures.

(Payne, Col. 10, lines 9-20; *see also* '519 Application, Pg. 11, lines 7-19.)

HTML

HyperText Markup Language - HTML is a SGML DTD. In practical terms, HTML is a collection of styles used to define the various components of a World Wide Web document.

(Payne, App. A, Exh. Pg. 38.)

```
set value_array(url)    ...URL of the thing bought...
(In the shopping cart case, this should be the URL of
the relevant catalog page)
```

(*Id.*, App. E, page entitled “Shopping Cart Mechanism; how to write payment and shopping cart URLs,” Exh. Pg. 130.)

In the case of **link 2**, a short audio segment is retrieved from a merchant computer and played. In the case of **link 3**, the query that can be entered into the query dialog box 4 is sent to a merchant computer, and a document is retrieved from the merchant computer and displayed.

('519 Application, Pg. 12, lines 1-6; *see also id.*, Fig. 2, above) (*similarly, see* Gifford, Col. 5, lines 13-17; *see also id.*, Fig. 2, above.)

For example, if **link 5** is activated the missing payment information document shown in FIG. 4 is retrieved from the merchant computer and displayed.

(*Id.*, Pg. 12, lines 15-18) (*similarly, see* Gifford, Col. 5, lines 27-29.)

f) **Payne Discloses Access To An Electronic Payment Back Office System And/or Providing A Payment Service**

To the extent that the '506 patent describes a user being provided access to a payment electronic back office system, it is described as follows:

Once Bank POSvc application 510 has been activated, **user 100 will be able to connect to Bank services** and utilize the application to perform banking transactions, thus **accessing data from a host or data repository 575 in the Bank "Back Office."**

('506 patent, Col. 7, lines 32-36.)

Similarly, Payne teaches that using the payment application, the user connects to, and accesses data from, an existing financial network. This information, in turn, is used to perform payment services:

The prior art network based sales systems are not designed to allow users to use their **existing credit card and demand deposit accounts . . .**

('519 Application, Pg. 2, lines 18-20) (*similarly, see* Gifford, Col. 1, lines 45-48.)

A further object of the invention is to allow users in an untrusted network environment to use conventional financial instruments without requiring modification to existing financial system networks.

(*Id.*, Pg. 5, lines 12-15) (*similarly, see* Gifford, Col. 2, lines 46-49.)

The payment system accomplishes settlement by sending messages into an existing financial system network.

(*Id.*, Pg. 8, lines 3-5) (*similarly, see* Gifford, Col. 3, lines 46-48.)

Payne further teaches that the services provided include a payment service.

SUMMARY OF THE INVENTION

The invention relates to a network sales system for enabling users to purchase products using a plurality of buyer computers that communicate over a network with a plurality of merchant computers. Each merchant computer has a database of digital advertisements. Each digital advertisement includes a price and a product abstract. Buyer computers request, display, and respond to digital advertisements from merchant computers. **Users can purchase products with their buyer computers after they have specified an account to pay for the purchase. A network payment service is used to authorize the purchase before merchant fulfillment is performed.**

('519 Application, Pg. 6, line 20 – Pg. 7, lines 7) (*similarly, see* Gifford, Col. 3, lines 12-25.)

g) **Payne Discloses Computers With Processors And Storage Devices Capable Of Executing Instructions**

Payne discloses multiple computers that contain storage devices and processors that are capable of executing instructions.

In another aspect, the invention features a network-based link message system that includes at least one client computer for operation by a client user and at least one server computer for operation by a server user. The client computer and the server computer are interconnected by a computer network. The client computer is **programmed to send an initial link message to the server computer. The server computer is programmed to receive the initial link message from the client computer and to create, based on information contained in the initial link message, a session link message that encodes a state of interaction between the client computer and the server computer. The session link message includes a session link authenticator, computed by a cryptographic function of the session link contents, for authenticating the session link message. The server computer is programmed to cause the session link message to be sent to the client computer. The client computer is programmed to cause the session link message to be sent to a computer in the network that is programmed to authenticate the session link message by examining the session link authenticator and that is**

programmed to respond to the session link message based on the state of the interaction between the client computer and the server computer.

(Payne, Col. 2, lines 43-65.)

In an alternate embodiment, **document 22 is executed at 23 as a program. A program is defined as a set of instructions that can exhibit conditional behavior based upon user actions or the environment of the buyer computer.** As is known to those skilled in the art, there are many techniques for representing programs as data. The program can be interpreted or it can be directly executed by the buyer computer. The program when executed will cause the buyer computer to interact with the user leading to the user purchase request 24, and the purchase message 25.

(*Id.*, Col. 13, line 24 – Col. 14, line 8.)

Payne further discloses computers that utilize databases for storage of information (storage devices), and also discloses those computers (processors) executing instructions for providing a commercial service over a digital network:

Creation computer 20 creates a **digital advertisement database 18 that stores advertising documents** (which may for example be in the form of summaries of newspaper or newsletter articles, accompanied by prices) and product fulfillment items (**which may be the products themselves if the products can be transmitted over the network**, or which may be hard goods identifiers if the products are hard goods, i.e., durable products as opposed to information products). **Creation computer 20 transmits contents of the advertising document database 18 to merchant computer 14 to enable the merchant computer to cause advertisements and products to be sent to buyers. Merchant computer 14 maintains advertising documents locally in advertising document database 15.**

(*Id.*, Col. 4, lines 52-65.)

A digital advertisement includes a product description and a price. In digital advertisement database 65 prices and descriptions may be stored separately, and one price may apply to many product descriptions.

('519 Application, Pg. 10, line 23 – Pg. 11, line 2) (*see also, e.g.,* Payne, Col. 2, lines 43-65 and Col. 3, lines 38-42, and Fig. 1, above.)

Payne also explicitly or inherently discloses processors.

In another aspect, the invention features a network payment system that includes at least one buyer computer for operation by a user desiring to buy a product and at least one **payment computer for processing payment messages** from the buyer computer.

(Payne, Col. 3, lines 38-42.)

If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and **the payment URL is processed in a manner analogous to the processing of payment URLs for individual products** (beginning with step 36 in FIG. 2).

(*Id.*, Col. 8, lines 25-31.)

h) Payne Discloses A Virtual Information Store Storing Information Entries And Attributes Associated With An Object Identity That Has A Unique Network Address

(1) Payne teaches a system for associating object identities with information entries and attributes

For example, Payne teaches sending a payment URL to a payment computer, containing associated information entries and attributes. This payment URL includes a unique digital signature, which is associated with the information entries and attributes, because it is a hash of the information entries and attributes in the payment URL:

The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier

that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. **The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.**

(Payne, Col. 5, lines 27-46.)

Payne further teaches associating a payment object identity (i.e., the signature or hash, which is the MD5 hash of the attributes and information entries in the payment URL) with information entries (e.g., a text description of the item to be put into the buyer's SmartStatement) and attributes (e.g., "Description (desc)," below, is an attribute).

<p>A payment URL looks like this:</p> <p><code>http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value2</code></p> <p>In any of the field values, the following characters are escaped: '+', '&', '=', and anything less than 0x20.</p> <p>The URL fields encode the details of the payment order.</p> <p style="text-align: center;">* * *</p>
<p>Description (desc)</p> <p>This is a text description of the item to be put into the buyer's SmartStatement</p> <p style="text-align: center;">* * *</p>
<p>Signature (hash)</p> <p>The signature (hash) is computed as the MD5 hash of {key, fieldstring}, where fieldstring is everything after the colon. The key is a secret key shared between Open Market and the merchant. The signature prevents user tampering of the</p>

(Id., App. E, Pg. 5, Exh. Pg. 128.)

Additionally, Payne also teaches associating *other object identities* (e.g., object identities associated with a merchant computer) with information entries and attributes. Payne teaches creating a signature hash associated with the information entries and attributes, which are included in the access URL that is sent to a merchant computer:

An access URL looks like this:

`http://merchant.foo.com/@hash:field1=value1&field2=value2/real-url`

In any of the field values, the following characters are escaped: '+', '&', '=', '.', and anything less than 0x20.

The URL fields encode the details of the access:

Expire (expire)
This field specifies the expiration time for the access, in seconds since January 1, 1970 UTC.

IP Address (ip)
specifies the ip address from which the request must come

Signature (hash)
The signature (hash) is computed as the MD5 hash of (key, fieldstring), where fieldstring is everything after the colon. The key is a secret key shared between Open Market and the merchant. The ipaddr is the IP address of the client attempting access and domain is the access domain. The signature prevents user tampering of the access URL.

The effect is to grant access to a specified domain, from a specified client IP address, for an (optional) period of time.

If desired, any additional information can be encoded in an access URL.

User ID (id)
The unique ID of the buyer, from the field principal_id of the principal table in the payment database. This field will be included in an access URL if the name value pair id=? was in the payment URL.

User Name (name)
The print name of the buyer, from the field principal_name from the principal table in the payment database. This field will be included in an access URL if the name value pair id=? was in the payment URL.

(*Id.*, App. E, Pg. 9, Exh. Pg. 136.)

Above, the merchant access “signature(hash)” is associated with information entries and attributes contained in the access URL (*e.g.*, User ID, User Name, IP Address; *see also id.*, App. D, Pgs. 2-3, Exh. Pgs. 103-104 ; App. F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164; ‘519 Application, Pg. 6, line 21 – Col. 7, line 3.)

A digital advertisement includes a product description and a price. In digital advertisement database 65 prices and descriptions may be stored separately, and one price may apply to many product descriptions.

(*Id.*, Pg. 10, line 23 – Pg. 11, line 2.)

(2) **Payne teaches that an object name
(object identity) will represent a networked object**

The object identity "signature" is shared over the network between computers via the payment URL mechanism:

The buyer, merchant, payment, and creation computers are all inter-connected by a computer network 10 such as the Internet.

(Payne, Col. 4, lines 43-45.)

A payment URL looks like this: `http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value2`

In any of the field values, the following characters are escaped: '+', '&', '=', '.', and anything less than 0x20.

The URL fields encode the details of the payment order:

* * *

Signature (hash)

The signature (hash) is computed as the MD5 hash of {key, fieldstring}, where fieldstring is everything after the colon. The key is a secret key shared between Open Market and the merchant. The signature prevents user tampering of the

(Id., App. E, Pg. 5, Exh. Pg. 128.)

Additionally, Payne also teaches an object identity sent to the merchant computer via an access URL representing a networked object:

An access URL looks like this: `http://merchant.fco.com/@hash:field1=value1&field2=value2/real-url`

* * *

The URL fields encode the details of the access:

* * *

Signature (hash)

The signature (hash) is computed as the MD5 hash of {key, fieldstring}, where fieldstring is everything after the colon. The key is a secret key shared between Open Market and the merchant. The ipaddr is the IP address of the client attempting access and domain is the access domain. The signature prevents user tampering of the access URL.

(Id., App. E., Pg. 9, Exh. Pg. 136.)

This paper discusses the requirements on a universal syntax which can be used to refer to objects available using existing protocols, and may be extended with technology. It makes a recommendation for a generic syntax, and for specific forms for "Uniform Resource Locators" (URLs) of objects accessible using existing Internet protocols.

(*Id.*, App. D, Pg. 1, Exh. Pg. 102.)

Payne also teaches a system for associating, *e.g.*, payment object identities (sender unique nonce) with payment order information entries and attributes (sender identity, payment amount, beneficiary):

A payment order describes **the identity of a sender, a payment amount, a beneficiary, and a sender unique nonce.**
A sender is a principal making a payment.

(*Id.*, Pg. 5, lines 19-22) (*similarly, see* Gifford, Col. 2, lines 53-55.)

Payne also discloses that nonces (*i.e.*, object identities) representing a payment order are stored in a settlement database.

Replay is checked for by **making sure that the sender did not previously present a payment order with the same nonce by checking an index of committed payment orders by nonce in settlement database 74.** If nonces are based on time, then a payment order that is older than an administratively determined value can be rejected out of hand. **Time based nonces or sequential nonces** permit old nonces to be removed from the settlement database 74.

(*Id.*, Pg. 21, line 24 – Pg. 25, line 6) (*similarly, see* Gifford, Col. 8, lines 55-62.)

One of ordinary skill in the art would understand the nonce described in Payne to be a number used once, a unique identifier used for authentication purposes.

Payne also discloses that "digests" (*i.e.*, object identities) are sent along with an object (*i.e.*, a payment order) in order to identify the object in the client or payment computer databases.

In a first method for authenticators, at steps 80 or 89, **a digest of the payment order is signed by the sending computer**

using a public-key cryptographic system such as RSA. This signature is used as the authenticator. As is well known in the art, the signing can be accomplished using a private key created from a public-key pair, where the signing key is only known by the signer, and the other public key is known to the receiving computer. At the payment computer the public key corresponding to each sender is kept in credential database 76. The private key for the payment service is also kept in database 76. At steps 82 or 91, the signature of the received message is checked using the public key known to the receiving computer.

(*Id.*, Pg. 26, lines 10-22) (*similarly, see* Gifford, Col. 10, lines 30-42.)

A digest of a payment order can be created with an algorithm such as MD5 (R. Rivest, The MD5 Message-Digest Algorithm, MIT Laboratory for Computer Science, Network Working Group Request for Comments 1321).

(*Id.*, Pg. 30, lines 10-13) (*similarly, see* Gifford, Col. 11, lines 60-63.)

Payne also discloses that an authenticator, generated by a Smart-Card, can be used as an object identifier to identify a payment order object:

In a third method for authenticators, at step 80 the authenticator is computed by a protected device external to the system such as a Smart-Card. A protected device is specifically designed to be extremely difficult both to replicate and to compromise. In this method, the payment order is communicated at 80 to a Smart-Card. The Smart-Card computes and signs a digest of the payment order, and then communicates the signature back at 80 to be used as an authenticator. **A Smart-Card produced authenticator uniquely associates a payment order with its creating Smart-Card.**

(*Id.*, Pg. 27, lines 10-19) (*similarly, see* Gifford, Col. 10, lines 54-64; *see also* Payne, App. D, Pgs. 1-3, Exh. Pgs. 102-104.)

Additionally, Payne also teaches that object identities (i.e. "names") are resolvable, that is, the resolvable object identities allow an object to be accessed over the network:

Resolvable	A name will contain enough information to allow the document or index to which it refers to be accessed, perhaps via resolution into an intermediate, more physical, name.
Unique	Each object can only have one such name. The fact that two such names are different implies that the objects to which they refer are different (in some way).

(Payne, App. D, Pgs. 2-3, Exh. Pgs. 103-104.)

The invention relates to a network sales system for enabling users to purchase products using a plurality of buyer computers that communicate over a network with a plurality of merchant computers. Each merchant computer has a database of digital advertisements. Each digital advertisement includes a price and a product abstract. Buyer computers request, display, and respond to digital advertisements from merchant computers.

('519 Application, Pg. 6, line 21 – Pg. 7, line 3) (*similarly, see Gifford, Col. 3, lines 15-21.*)

(3) **Payne further teaches
storing information entries and
attributes in a virtual information “store”**

Payne discloses the use of an associative array (i.e., a TCL associative array, which stores the signature hash) to store information entries and attributes in a virtual information store associated with a payment computer:

```
The value_array contains the necessary name-value pairs to handle paymen

set value_array(domain) ...domain... (a domain is a security c
    of the thing purchased, it is also used to detect duplic
    purchases, so it should be unique to separately buyable
set value_array(desc)    ...item description...
set value_array(amt)     ...monetary amount...
set value_array(cc)      ...currency code... (OPTIONAL, but US i
set value_array(expire)  ...seconds of access... (OPTIONAL, defa
                        is 30 days at the moment)
set value_array(url)     ...URL of the thing bought...
                        (In the shopping cart case, this should be the URL of
                        the relevant catalog page)
```

(Payne, App. E, Pg. 6, Exh. Pg. 130.)

In particular, in the example TCL code immediately above, the set value_array(desc) instruction stores the “item description” in the associative array “value_array” using the

attribute “desc.” A TCL associative array is an information store (i.e., the array stores data, such as the item description, in a table, which is indexed by the attribute “desc.”) The “set” instruction adds the information entries and attributes to the associative array. Therefore, Payne discloses storing information entries and attributes in a virtual information store associated with a payment computer.

Additionally, Payne also teaches storing networked objects in a virtual information store associated with a merchant computer:

Creation computer 20 is programmed to build a “store” of products for the merchant. A printout of a computer program for use in creating such a “store” in accordance with the present invention is provided as Appendix F.

(*Id.*, Col. 4, lines 46-49.)

[T]he payment computer creates an access URL (step 80) that includes a **merchant computer identifier, a domain identifier, a product identifier, an indication of the end of the duration time for which access to the product is to be granted, the buyer network address, and an access URL authenticator that is a digital signature based on a cryptographic key. The access URL authenticator is a hash of other information in the access URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.** The payment computer then records the product identifier, the domain, the user account, the merchant account, the end of duration time, and the actual payment amount in the settlement database (step 88).


The payment computer then sends a redirect to access URL to the buyer computer (step 90), **which sends the access URL to the merchant computer (step 92). The merchant computer verifies whether the access URL authenticator was created from the contents of the access URL using the cryptographic key (step 94).** If not, the merchant computer sends a document to the buyer computer indicating that access to the product is denied (step 96).

Otherwise, the merchant computer verifies whether the duration time for access to the product has expired (step 98). This is done because the buyer computer can request

access to a purchased product repeatedly. If the duration time has expired, the merchant computer sends a document to the buyer computer indicating that the time has expired (step 100). Otherwise the merchant computer verifies that the buyer computer network address is the same as the buyer network address in the access URL (step 101), and if so, sends a fulfillment document to the buyer computer (step 102), which is displayed by the buyer computer (step 104).

(*Id.*, Col. 7, lines 18-50.)

Figure 10 of Payne discloses an access URL, which consists of information entries and attributes (e.g., expiration date, user name) associated with an object identity (the “hash” signature” in the access URL), which would be stored in a virtual information store associated with a *merchant computer*, in a similar manner to that described for the payment URLs associated with a payment computer, above.

<u>F</u> ile	<u>O</u> ptions	<u>N</u> avigate	<u>A</u> nnote	<u>H</u> elp
Document Title:	LC's debut on the Internet; Library of Congr			
Document URL:	http://www.openmarket.com/fe720f58da6d4ebd268			

Payne – Fig. 10 (selected portion)

It is suggested that each object have a unique name. This name could be stored in the object in some representations, or stored in a database accessible to the server, for example. Any references within that object should be parsed in the context of the official name. In the presence of a directory service, the official name will normally be the registered name of the object. However, a name in any scheme will do, so long as it is completely specified.

(*Id.*, App. D, Pg. 5, Exh. Pg. 128.)

Encoding access in URLs

An access URL looks like this:

`http://merchant.foo.com/?hash:field1=value1&field2=value2/real-url`

In any of the field values, the following characters are escaped: '+', '&', '=', '.', and anything less than 0x20.

The URL fields encode the details of the access:

Expire (expire)

This field specifies the expiration time for the access, in seconds since January 1, 1970 UTC.

IP Address (ip)

specifies the ip address from which the request must come

Signature (hash)

The signature (hash) is computed as the MD5 hash of {key, fieldstring}, where fieldstring is everything after the colon. The key is a secret key shared between Open Market and the merchant. The ipaddr is the IP address of the client attempting access and domain is the access domain. The signature prevents user tampering of the access URL.

The effect is to grant access to a specified domain, from a specified client IP address, for an (optional) period of time.

If desired, any additional information can be encoded in an access URL.

User ID (id)

The unique ID of the buyer, from the field principal_id of the principal table in the payment database. This field will be included in an access URL if the name value pair id=? was in the payment URL.

User Name (name)

The print name of the buyer, from the field principal_name from the principal table in the payment database. This field will be included in an access URL if the name value pair id=? was in the payment URL.

(*Id.*, App. E, Pg. 9, Exh. Pg. 136.)

```
puts $f "<INPUT name='use_url' type='checkbox' \
      (state use_url)><B>File Name of Information</B><BR>"
puts $f "By choosing this option you can include the name of your file.<P>"

puts $f "<H3>Custom Information for Store Items</H3>"

puts $f "You can also specify attributes of your products to be entered"
puts $f "that are not supplied above. Examples: Colors, Height, Sizes,"
puts $f "Dimensions, Number of Pages, Running Time.<P>"
```

(*Id.*, App. F, page entitled "CustItemEntryPage.cgi." Exh. Pg. 164).

The invention relates to a network sales system for enabling users to purchase products using a plurality of buyer computers that communicate over a network with a plurality of merchant computers. **Each merchant computer has a database of digital advertisements. Each digital advertisement includes a price and a product abstract.** Buyer computers request, display, and respond to digital advertisements from merchant computers.

('519 Application, Pg. 6, line 21 – Col. 7, line 3) (*similarly, see Gifford, Col. 3, lines 15-21.*)

A digital advertisement includes a product description and a price. **In digital advertisement database 65 prices and descriptions may be stored separately, and one price may apply to many product descriptions.**

(*Id.*, Pg. 10, line 23 – Col. 11, line 2) (*similarly, see* Gifford, Col. 4, lines 53-56.)

Further, Payne discloses a similar virtual information store(s) on the payment computer, for storing information about accounts and purchases:

... each payment computer [has] an account database 73, a settlement database 74, an authorized address database 75, a sender credential database 76, a financial system interface 77, and a real-time authorization interface 78. The interfaces 77 and 78 may be implemented by a single communications line.

(*Id.*, page 19, lines 19-24) (*similarly, see* Gifford, Col. 8, lines 2-7.)

The account database, for example, has information entries and attributes regarding a user's account, such as spending limits and amount spent, as well as identifiers for the account and its location, even if outside the network:

Account database 73 maintains **temporal spending amounts, such as the amount spent in the current day, and also maintains temporal spending limits.** The account database may also maintain a **translation between principal identifiers and external account identifiers.** Settlement database 74 records committed payment orders along with any authorization information for the orders that was obtained from interface 78.

(*Id.*, Pg. 20, lines 5-12) (*similarly, see* Gifford, Col. 8, lines 13-20.)

Payne also teaches storing object identities (*e.g.*, nonces) associated with payment orders in a settlement database (*i.e.*, a VIS), so that the nonces can be checked (*i.e.*, used to identify a payment order object) during a payment transaction.

Replay is checked for by **making sure that the sender did not previously present a payment order with the same nonce by checking an index of committed payment orders by nonce in settlement database 74.** If nonces are based on time, then a

payment order that is older than an administratively determined value can be rejected out of hand. **Time based nonces or sequential nonces** permit old nonces to be removed from the settlement database 74.

(*Id.*, Pg. 21, line 24 – Pg. 25, line 6) (*similarly, see* Gifford, Col. 8, lines 55-62.)

One of ordinary skill in the art would understand the nonce described in Payne to be a number used once, a unique identifier used for authentication purposes.

**(4) Payne teaches assigning a
unique network address to an object identity**

In the WebX Litigation, the purported patent owner WebX has proposed that the term “unique network address” requires no construction. Requester understands that WebX considers this phrase to include URLs. While Requester does not agree that such a broad reading of the claim would be appropriate in the Litigations, WebX is not expected to argue during reexamination that URLs are beyond the scope of the claims at issue.

Payne teaches using payment URLs to identify objects associated with a payment computer, and in so doing, identifies a unique network address for the object identity, or an address that is reachable over the network, and leads only to the object being sought:

The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.

(Payne, Col. 5, lines 43-47.)

The screenshot shows a web application window with a menu bar at the top containing 'File', 'Options', 'Navigate', 'Annotate', and 'Help'. Below the menu bar, there are two input fields: 'Document Title' with the value 'Smart Statement Detail' and 'Document URL' with the value 'http://payment.openmarket.com/@c32f184c09c31'. To the right of these fields is a small icon of a document with a magnifying glass. Below the input fields is a section titled 'Smart Statement Detail' with a warning icon (a triangle with an exclamation mark) to its right. The text below the title reads: 'This is the detailed information about a particular transaction from your Smart Statement'. Below this is a section titled 'Transaction Information' containing the following details: url: http://www.openmarket.com/decon/avail/mall/need-fingerprint/mkarticle.asp, transaction_log_id: 34254.0, currency: US, transaction_date: 7/11/77633, initiator: 1.0, expiration: 2292000, description: Read Data Control Article, amount: 2.95, beneficiary: 1.0, ip_address: 189.270.213.17, transaction_type: p, and domain: need.internet-1. Below the transaction information is a section titled 'Merchant Information' containing the following details: telephone: 617-621-9901, address_1: Open Market, Inc., address_2: 215 First Street, fax: 617-621-1701, address_3: Cambridge, MA, email: testmerchant@openmarket.com, and principal_name: Test Merchant.

Payne – Fig. 12 (selected portion)

Payne further teaches that the payment URL is a network accessible address that is created by concatenating a base URL with the object identity:

The diagram is titled 'Encoding payment orders in URLs'. It shows a text box with the text 'A payment URL looks like this:'. To the right of this text is a diagram of a URL structure: 'http://baseURL/objectIdentity'. Below this, the full URL is given: 'http://payment.openmarket.com/pay.cgi?hash:field1=value1& field2=value2'.

(Id., App. E, Pg. 5, Exh. Pg. 128.)

Two components are necessary for the payment URL. The URL itself, which refers to the `nph-payment` script on the payment server, and the ticket, which is the signed name-value list.

The URL is usually a constant, it is stored in `.../lib/payment.tcl` as

```
set paylinkbase "$payment_server_root/bin/nph-payment.cgi?"
```

where `$payment_server_root` is inherited from `.../lib/mall.conf`

The ticket is created using `.../lib/ticket.tcl` by code like the following:

```
set nv(name1) value1
set nv(name2) value2
set ticket [create-ticket $secretkey nv]
```

where `name1-value1` and `name2-value2` are the name value pairs to be encoded. The procedure `create-ticket` properly formats and quotes the name value pairs, and signs the result using an MD5 hash of the string with the `secretkey`. The `secretkey` is an arbitrary string, but will usually be a 16-hex-digit DES key.

(*Id.*, App. E, Pg. 10, Exh. Pg. 138.)

Additionally, Payne teaches assigning a network-reachable access URL for object identities associated with a merchant computer:

Otherwise, the payment computer creates an access URL (step 80) that includes a merchant computer identifier, a domain identifier, a product identifier, an indication of the end of the duration time for which access to the product is to be granted, the buyer network address, and an access URL authenticator that is a digital signature based on a cryptographic key. **The access URL authenticator is a hash of other information in the access URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.**

(*Id.*, Col. 7, lines 18-27.)

Appendix E discloses that the access URL is created by concatenating an address at the merchant computer with the object identity ("`@hash`") associated with information entries and attributes:

An access URL looks like this:

`http://merchant.foo.com/@hash:field1=value1& field2=value2/real-url`

(*Id.*, App. E, Pg. 9, Exh. Pg. 136.) (*See also id.*, App. D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; '519 Application, Pg. 11, lines 14-19.)

2. The Gifford Prior Art¹¹

Providing services over a digital network such as the World Wide Web, using multiple computers, interacting with legacy systems, using object routers and value-added network switches was known in the art at least as early as 1993, when David K. Gifford filed the '519 Application, claiming a system for "Digital Active Advertising." United States Patent No. 5,724,424 ("Gifford"), issued March 3, 1998, and assigned to Open Market, Inc., claims priority as a continuation to the '519 Application, and the Gifford specification is substantially identical to the specification of the '519 Application.

The '519 Application is properly considered part of the Payne reference, as discussed above. While the '519 Application was incorporated by reference into Payne's disclosure, and therefore serves as part of the Payne 102(e) reference that invalidates all of the claims of the '506 patent, Gifford itself teaches a number of elements that would alternatively render obvious the claims of the '506 patent, when taken in combination with Payne. (*See discussion of '519 Application as part of the Payne Prior Art, above; see also parallel cites to the '519 Application and Gifford in the Claim Chart at Appendix A.*)

Among the significant teachings of Gifford are the following:

¹¹ Gifford was cited, but not relied upon by the Examiner during prosecution of the '506 patent. *See* Paragraph IV.C.SNQ 7, below.

a) **Gifford Discloses An Object Router
And / Or A Value-Added Network
Switch, Including On The Second Computer**

(1) **Object router**

See discussion of this element under the description of Payne, at Pg. 38, above.

(2) **Value-added network switch**

See discussion of this element under the description of Payne, at Pg. 40, above.

b) **Gifford Discloses Compatibility With Legacy
Databases And/or Legacy Computing Systems**

See discussion of this element under the description of Payne, at Pg. 42, above.

Alternatively, in view of Gifford's disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Gifford's invention would have been used to access any pre-existing databases/systems, e.g., a "legacy" database.

c) **Gifford Discloses The Use Of Web
Browsers, Web Pages And/or Web Page Controls**

See discussion of this element under the description of Payne, at Pg. 43, above.

Additionally, Gifford teaches using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages that have Web page controls:

The software architecture underlying the particular preferred embodiment is based upon the **hypertext conventions of the World Wide Web**. Appendix A describes the Hypertext Markup Language (HTML) document format used to represent digital advertisements, Appendix B describes the HTML forms fill out support in Mosaic 2.0, Appendix C is a description of the Hypertext Transfer Protocol (HTTP) between buyer and merchant computers, and Appendix D describes how documents are named with Uniform Resource Locators (URLs) in the network of computers. A document is defined to be any type of digital data broadly construed, such as multimedia documents that include text, audio, and video, and documents that contain programs.

('519 Application, Pg. 11, lines 7-19) (*similarly, see* Gifford, Col. 4, line 61 – Col. 5, line 6.)

d) **Gifford Discloses Access To An Electronic Payment
Back Office System And/or Providing A Payment Service**

See discussion of this element under the description of Payne, at Pg. 46, above.

e) **Gifford Discloses A Virtual Information Store That Stores
Information Entries And Attributes Associated With An
Object Identity That Has A Unique Network Address**

(1) **Gifford teaches a system for associating object
identities with information entries and attributes**

See discussion of this element under the description of Payne, at Pg. 49, above.

(2) **Gifford teaches that an object name
(object identity) will represent a networked object**

See discussion of this element under the description of Payne, at Pg. 52, above.

(3) **Gifford teaches storing information entries
and attributes in a virtual information “store”**

See discussion of this element under the description of Payne, at Pg. 55, above.

(4) **Gifford teaches assigning a unique
network address to an object identity**

See discussion of this element under the description of Payne, at Pg. 60, above.

Additionally, Gifford teaches using URLs to facilitate locating objects with identifiers.

Payment orders are signed with authenticators that can be based on any combination of a secret function of the payment order parameters, a single-use transaction identifier, or a specified network address.

('519 Application, Abstract) (*similarly, see* Gifford, Abstract.)

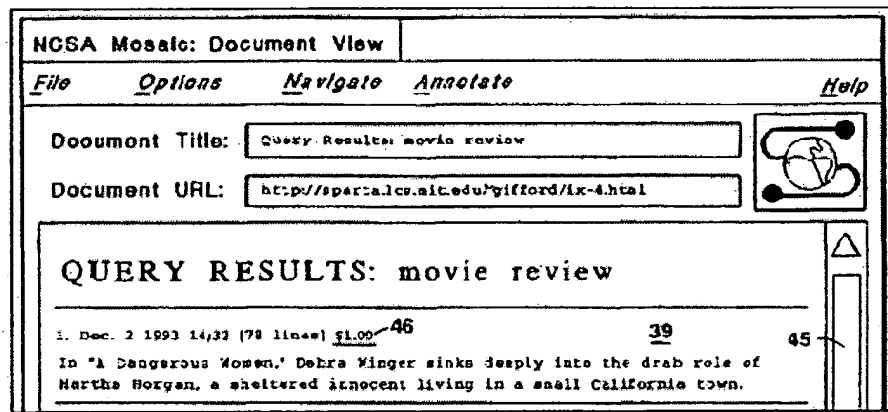
An initial user inquiry 19 from activating link 1 results in the HTTP request 20 for a specific document with a specified URL. The URL specifies the name of the merchant computer. The merchant computer retrieves the document given the URL at 21, and returns it to the buyer computer at 22.

(*Id.*, Pg. 13, lines 15-20) (*similarly, see* Gifford, Col. 5, lines 51-56.)

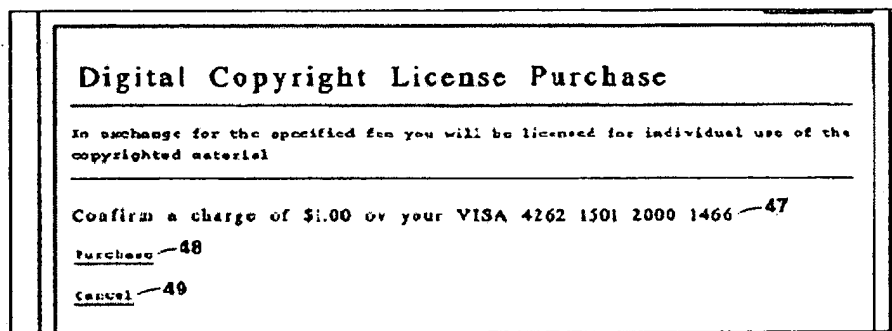
Each advertisement in the advertisement database (VIS) contains a link that represents a given product from a given merchant. When a user clicks on the link, a URL is generated which allows the user to enter purchase information and direct a request for a specific object to the merchant offering the object represented by the link, allowing the object to be located and sent back to the user upon payment:

Figure 9 shows **digital advertisements 39, 40, 41, 42, 43, and 44** that were found in response to the query initiated by button 40. A scroll bar 45 shows that there are additional digital advertisements that are not shown. When **link 46** is activated, the missing account information document shown in Figure 10 is returned by the merchant computer.

(*Id.*, Pg. 17, lines 18-24) (*similarly, see Gifford, Col. 7, lines 20-26.*)



'519 Application/Gifford – Fig. 9

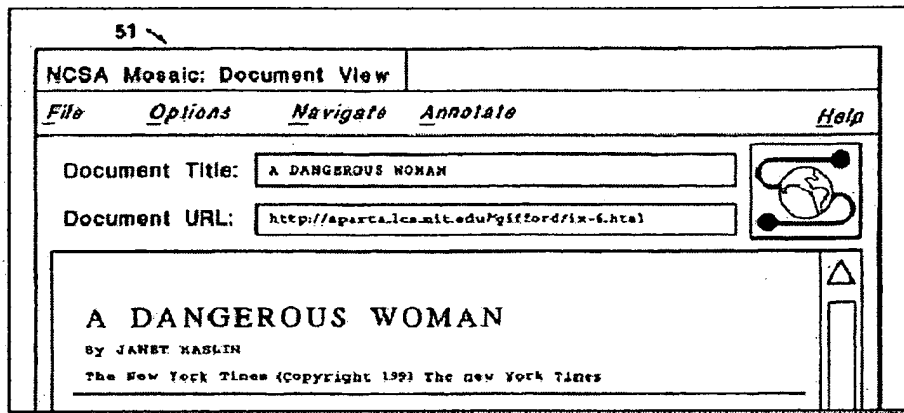


'519 Application/Gifford – Fig. 10

Figure 10 shows that the merchant computer has partial information on the buyer's account. Message 47 shows that the merchant computer already knows the buyer's account number. **Purchase button 48 will send the optional user reference string in dialog box 50 to the merchant computer described by the URL behind button 48 and purchase the product corresponding to digital advertisement 39. Cancel link 49 will return the user to the document shown in Figure 2.**

When purchase button 48 is activated, a document 51 is sent by the merchant computer and displayed by the buyer computer as shown in Figure 11.

(*Id.*, Pg. 18, lines 1-12) (*similarly, see* Gifford, Col. 7, lines 27-38.)



'519 Application/Gifford – Fig. 11

Appendix D describes how documents are named with Uniform Resource Locators (URLs) in the network of computers. A document is defined to be any type of digital data broadly construed, such as multimedia documents that include text, audio, and video, and documents that contain programs.

(*Id.*, Pg. 11, lines 14-19) (*similarly, see* Gifford, Col. 5, lines 1-6.)

3. The Ginter Prior Art¹²

Ginter discloses a services-based, controls-based, objects-based, and networks-based “virtual distribution environment” (VDE) for managing multi-party commercial transactions

¹² Ginter was neither cited, nor relied upon by the Examiner during prosecution of the '506 patent. See Section IV.B.SNQ 2 below.

including payment services. Ginter discloses everything claimed in the '506 patent, only in much greater detail and with many more examples. Ginter is a huge patent with 318 columns of text and 146 sheets of drawings, in which it describes several examples of use scenarios falling within the claims of the '506 patent. Appendix B maps each claim element of each '506 patent claim to exemplary corresponding disclosure in Ginter.

a) **Ginter Discloses The '506 Patent's Claimed "Inventions"**

As shown in the accompanying claim chart (Appendix B), Ginter discloses at least seven categories of VDE-use scenarios (which are not mutually exclusive) matching the claims of the '506 patent. (*See App. B at Element 70.*)

VDE Object Repositories: Any end user's VDE device (e.g., Figs. 7-8) is provided with the ability to select (e.g., Figs. 72B-72D) between various available objects (e.g., Figs. 5, 30-31), which selection activates various controls and causes communications with one or more VDE object repositories (first computer system) which in turn may communicate with other repositories and/or content or service providers (second computer system) which in turn may communicate directly or indirectly with the user device. (E.g., Figs. 78, 84 (Internet Repository 3404) and 86/86A.) (*See App. B at Element 70.*)

Other VDE Multi-Party Transactions: Any VDE content user, creator, or distributor engages in multi-faceted and at least two-way and two-party transactions (e.g., Fig. 35) both when creating multi-party VDE controls protecting content (e.g., Figs. 5, 30-31) and also requesting to "consume" VDE-protected objects (e.g., Figs. 5, 30-31, 41a-41d), as when registering for an object (Fig. 43), or opening an object (Fig. 49), or reading an object (Fig. 50), or accessing an object (Fig. 54)—all of which activate multiple VDE-controlled controls and transactions such as a "meter method," "billing method," and "budget method" (e.g., Figs. 3, 41a-41d, 45-48). These transactions often involve three or more separate parties (and

their separate computing systems), and communications over each of three or more legs of a communication web (e.g., a user of content communicates with two different sources of content, and those two sources communicate with each other) as part of a transaction. (E.g., Figs. 41a-41d, 77, 79, 87, 72B-72D). (See App. B at Element 70.)

VDE Display Unit: Ginter discloses provided VDE protection within a display device, making that a distinct VDE user device. Where a user's display device has its own VDE protection, the remainder of the user's available computing resources qualify as the first computer system able to send display and other information to that user device, while any and all other VDE nodes not operated by the user, such as any VDE server, object repository, content creator or distributor, or service provider qualify as a second computer system. (E.g., Figs. 7, 8, 70, 72B-72D.) (See App. B at Element 70.)

VDE Docking Terminal: Ginter discloses portable VDE user devices that can be docked with terminals provided by a retailer, bank or other business entity. Where the user's device docks with a business terminal, that terminal qualifies as the first computer system, while any and all other VDE nodes contacted as part of a transaction involving the user, such as any VDE server, object repository, content creator or distributor, or service provider qualify as a second computer system. (E.g., Figs. 7, 8, 71, 72B-72D.) (See App. B at Element 70.)

VDE Server With User Workstations: Ginter discloses corporate workstations as user devices connected over a LAN or other network to a VDE server (which qualifies as a first computer system). (222:40-47.) In this scenario, any VDE objects repository or other VDE node outside the corporation qualifies as a second computer system in communication with

the user devices (via the first computer system). (222:21-223:43; Fig. 8.) (*See App. B at Element 70.*)

VDE Smart Objects: Ginter discloses VDE smart objects used to conduct multi-party transactions involving a user device and at least two remote VDE sites (computer systems). (E.g., 74, 72B-72D.) (*See App. B at Element 70.*)

Interactive N-Party Applications: Ginter discloses interactive VDE-controlled games, teleconferencing and bulletin board services providing multi-site interaction and thus retrieving data from one or more other computer systems (both control data over the VDE network and data unique to the controlled content but still managed by VDE). (14:9-14.) (*See App. B at Element 70.*)

b) Services Based

Ginter's VDE provides and manages myriad commercial services. Ginter has more than 600 references to the word "service" (or variants) and identifies hundreds of different types of services, including services provided by VDE and services provided by users of VDE and managed by VDE. They include an unlimited range of on-line services such as CompuServe (e.g., 243:25, 279:47), legal research services such as LEXIS (272:50, 273:61), other commercial database services, information delivery services, information clearinghouse services, credit-card, billing, and other financial services (including VISA, MasterCard and American Express services (229:8-13)), audit services, certification services, CAD/CAM services, service-locator and information-locator services, software description list services, store-and-forward services, home banking services, advertising services, video production services, testing services, smart-agent execution services, electronic negotiation services, VDE-control services including "services-based" VDE functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel,

communication, database, backup, security, clearinghouse, repository, and name services, etc. (E.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 229:7, 223:41, 229:8-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44). (See App. B at Element 70.)

Each VDE content creator, distributor, repository, clearinghouse, and financial service provider provides a commercial service (e.g., making content or credit available pursuant to VDE-specified and/or VDE-negotiated VDE controls at VDE-enforced prices). (E.g., 2:56-61, 6:28-34, 8:17-21, 9:37-40, 16:13-20, 19:9-15, 45:23-57, 157:28-36, 248:38-40, 249:46-49, 279:18-21, 292:65-293:18). (See App. B at Element 128.)

VDE itself is services-based, using, e.g., Remote Procedure Calls to access remote VDE services. (E.g., 59:18, 70:65, 73:46, 87:6, 87:45-55, 90:16-29, 115:66-116:17). (See App. B at Element 70.)

Ginter discloses several mechanisms for linking signals from a user application to transaction services and applications by, e.g., routing information and objects between the two, and creating “channels” (a task processing mechanism) for linking user-initiated events and service requests to the executable transactional methods (applications) needed to service those requests. (E.g., 110:41-112:27, 113:66-115:30; and see Figs. 41a-41d and 168:61-172:54).

c) Controls Based

At the heart of Ginter’s VDE system are “controls” (also called “rules” and “control structures”) created by VDE users, using other VDE controls, and then used by VDE to control the same or other users’ use of VDE-protected objects and services. The word “control” (or variants) appears 1,939 times in Ginter (including 1,640 instances of the word

“control” and 115 instances of “controls”). Figs. 5A and 5B hint at the wide variety of controls that are associated with any VDE object. (E.g., Figs. 30-31; 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63.) (*See App. B at Element 72.*)

Every control mentioned in Ginter is associated with a commercial service. VDE itself is a commercial service, providing transaction management, control, security, auditing, and other related services. Many VDE controls are also associated with some third-party commercial service as well, such as the providers or distributors or clearinghouses of VDE-protected content, including independent financial services providers. (See generally Figs. 1-2, 41a-41d, 77-87.) (*See App. B at Element 72.*)

Most of the controls disclosed in Ginter are activated by users entering requests via a user device in response to displayed information communicated via VDE from elsewhere. For example, Ginter discloses in connection with Figs. 72B-72D displaying various content and action choices to a user, and the user’s selection of any of those choices activates one or more “controls” associated with the user’s selection. Examples of controls include transaction limits as shown in Figs. 72B, 72C, and any of the types of controls identified in Figs. 5A/5B (and/or at 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63) can be associated with any of the content objects shown in Fig. 72D. A user selecting any object (e.g., any listed in Fig. 72D), begins a path of execution of multiple controls, typically involving multiple parties. VDE management transactions rely on VDE controls including VDE Rights Applications and executable “components” thereof (*e.g.*, component assemblies and load modules)) and/or VDE Application Templates. (E.g., 4:25, 4:42, 5:7, 6:28-54, 7:8, 7:57, 40:14, 40:64, 132:4, 147:67, 177:56, 178:1.) These user-selectable controls are

separate from the underlying VDE foundation software. (E.g., 7:10-23, 27:9-17, 286:14-52, 288:43-289:5.) (See App. B at Element 72.)

d) Objects Based

VDE creates and uses “objects” that tie particular desired content to multiple executable controls governing, e.g., access to and use of that content. Each VDE object has several properties that are typically recorded in the object and subsequently in a VDE secure database wherever the object is registered. (154:65–155:30.) A VDE object may also have a network address and/or URL (i.e., see “content reference 3328”). (286:1-5.) Some of the properties of a VDE object include: 1) VDE object identifier – a value that uniquely identifies the VDE object; 2) Creator ID; and 3) Attribute field (155:2-12). (See App. B at Elements 74-77.)

Ginter discloses various “virtual” stores for objects. An object may be registered at one particular VDE-protected appliance but its content physically stored elsewhere, and thus only “virtually” stored at the first appliance. For example, a typical VDE object repository makes VDE-protected content accessible to users (subject to the controls governing the content and the user) via a content catalog 3322 (which can be browsed and searched by the user to select his or her desired content). Content may be physically stored with the local content storage 3326 or virtually stored via content references 3328 that provide the physical location of the content. (Fig. 78.) (See App. B at Elements 74-77.)

Additionally, Ginter discloses performing transactions using “intelligent agents” (a/k/a smart objects.) (See, generally, Ginter, Fig. 73-75 and accompanying description.) In one example, when the user requests content information, a container object incorporating a description of the material that is requested, information about the user (e.g., delivery information, payment information, and possibly demographic information) may be packaged

along with a control specifying the terms on which the container may negotiate to obtain the content. (*See, generally, Fig. 73.*) The container is sent first to a “search / catalog system” to determine where the information requested might be stored. (*See, generally Ginter, Fig. 74 and description.*) Subsequently, the container may be forwarded to any number of VDE content repositories to obtain the content on terms acceptable to both the user and the distributor. (*Id.*) Once the transaction is consummated, the content is placed in the container object, which is transmitted back to the user. (*Id.*) (*See App. B at Elements 74-77.*)

e) Networks Based

Ginter's VDE provides and manages myriad commercial services over digital networks, including corporate networks, local-area networks, wide-area networks, and the Internet. (E.g., Fig. 8; 222:21-223:43.) (*See App. B at Element 70.*)

Ginter discloses making VDE objects compatible with Web protocols (*e.g., HTTP, URL standards (100:31-37, 287:16-21)*) such that end users can request content that is retrievable from Web servers. A particular example given in Ginter is storing stock and company information at different Web servers in New York and Dallas (280:60-67), and accessing those servers with the Mosaic Web browser (287:16-21). When the user uses her web browser to select a particular service, the selection activates associated VDE controls that manage locating and accessing that service, and associated payment, billing, auditing and other financial services, all under VDE transaction management. (*See App. B at Element 70.*)

f) Multi-Party Commercial Transactions

VDE brings together any number of possibly independent providers, distributors and consumers of electronic content, including content comprising software applications, databases, electronic commerce marketplaces, and interactive games, allowing them to

conduct transactions (e.g., licensing, purchasing, or negotiating) controlled by executable controls and objects (created by the participants using VDE) and by management and financial services provided by the VDE system provider(s). Each VDE content creator, distributor, repository, clearinghouse, and financial service provider provides a commercial service (e.g., making content or credit available pursuant to VDE-specified and/or VDE-negotiated VDE controls at VDE-enforced prices). Ginter discloses using VDE to engage in a wide range of three-way and n-way transactions among these VDE commercial service providers, including the transaction of using VDE to negotiate and form VDE-enforced electronic agreements among three or more parties. (E.g., 2:56-61, 6:28-34, 8:17-21, 9:37-40, 16:13-20, 19:9-15, 45:23-57, 157:28-36, 168:61-172:54, 248:38-40, 249:46-49, 279:18-21, 292:65-293:18.) (*See* App. B at Element 137.)

VDE transactions typically involve three or more parties and computer systems, each of whom communicates with the others as part of the VDE transaction. For example, a VDE object repository may offer users a catalog of VDE-controlled objects, only some of which are physically stored at the VDE object repository, while others are stored virtually at the repository, but physically at some remote site (e.g., Web server). (E.g., 286:1-13.) Once the request for content has been received, the content can be retrieved from the remote location and transmitted to the user, or the remote storage system can be instructed to deliver the content directly to the user's system (i.e., processing for a transaction can be passed over to another computer system.) (*Id.*) (*See* App. B at Elements 70 and 137.)

Users of VDE have several mechanisms with which to select particular commercial services/applications, and controls managing those services, whether they are conventional services/applications managed by VDE or VDE-management services/applications. For

example, users are provided lists or menus of such services/applications from which to choose. A VDE object repository and clearinghouse (*e.g.*, Fig. 78) is an example of a VDE site providing users with the ability to select among multiple commercial services. (*E.g.*, 279:22- 292:62.) (*See App. B at Element 71.*)

g) Payment Processing Services

Ginter discloses that when the user requests specific content, additional transaction information may be obtained from other systems (*e.g.*, confirmation of payment details, payment processing, and verification of audit details for the construction of the VDE controls that will be applied to the container object that is returned to the user). (286:5-13; *more generally* 286-288.) Payment may be processed in real-time via communication with a clearinghouse (a system within the VDE object repository). (Fig. 78.) In some cases, credit may be extended by the clearinghouse and reconciled as the user “consumes” the VDE content, and reports the usage via the auditing systems. (*See App. B at Element 70.*)

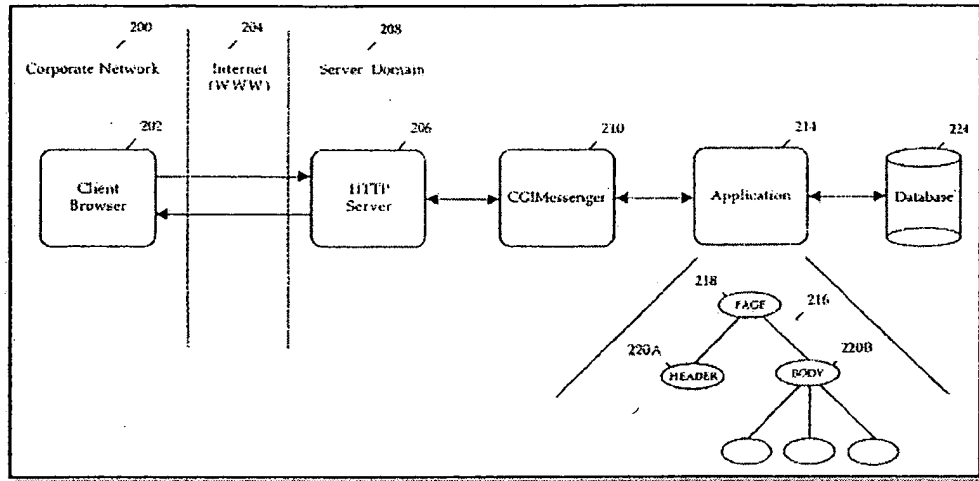
4. The Popp Prior Art¹³

The idea of providing object-oriented services over a digital network was known in the art prior to the filing of the application leading to the ‘506 patent, and was fully disclosed in United States Patent No. 6,249,291 to Nicolas Popp *et al.*, which issued on June 19, 2001, from an application filed on September 22, 1995.

The basic elements of the system disclosed by Popp are, in one embodiment, a client computer that communicates over a network, such as the World Wide Web, reaching

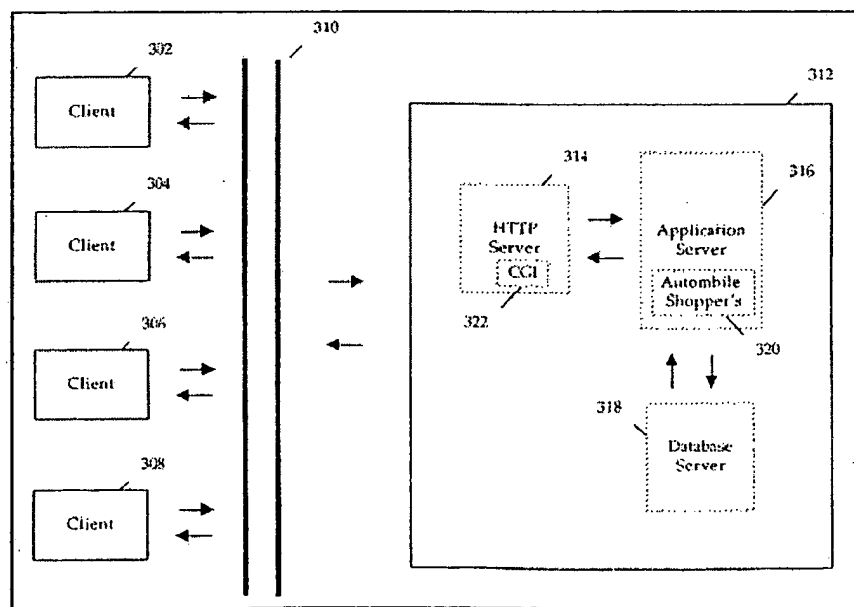
¹³ Popp was relied upon by the Examiner to reject all but one of the then-pending claims of the ‘506 patent as anticipated, in response to which Applicant 1) amended all then-pending claims to add additional limitations found in the one allowed dependent claim, and 2) cancelled this dependent claim. Each of these resulting claims is either anticipated by or obvious over Popp, either alone, or in view of another prior art reference never disclosed during the original prosecution. *See* Section IV.B.SNQ 3, below.

applications that run on a second server/computer anywhere on the Internet, as well as receiving information to be displayed on the user's computer that is generated from sources external to the computer, such as external databases or e-mail systems. (Popp, Abstract.)



Popp – Fig. 2

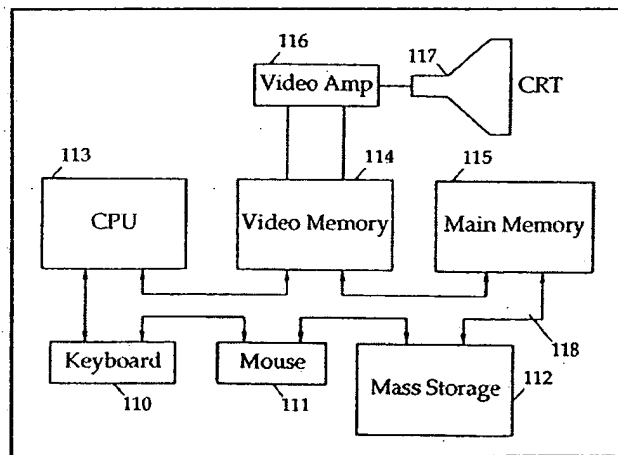
Popp teaches that one or more client computers can communicate with one or more other server computers, including an HTTP Server, an Application Server and a Database Server, each of which contains information that is used to allow the users on client computers to complete a transaction over the network. (See, e.g., Popp, Fig. 3A.)



Popp – Fig. 3A

In one embodiment, a buyer browses for information on cars from a Web page that is displayed on the user's computer in a Web browser, such as the Mosaic Web browser.

(Popp, Col. 6, lines 40-41.) From this page, the user can further search for information about specific cars that appear in response to a user's search, including information about specific options and packages available for a certain model and/or type of car, and/or information about specific dealers that have such cars. All of these transactions are carried out with computers that exist in a network(s) that is remote to the user (client), connected by the Internet. The Web pages, in turn, are displayed through the user's computer on the user's monitor. The user's computer contains a storage medium, a processor that is capable of executing instructions, and peripherals, such as a display device. (*See, e.g., Popp, Fig. 1*)



Popp – Fig. 1

Each of the documents disclosed in Popp, as well as each of the applications being executed, is considered an object, particularly as the patent owner has proposed construing that term in the WebX Litigation, namely as a “collection of information involved in a transaction.” Similarly, the computers on the network are equipped with object routers, which “perform object routing,” as WebX, has proposed construing this term. WebX has

proposed construing object routing as “providing an information channel for identifying and accessing an object” (*see* WebX Claim Constructions, Exh. Pg. 49,) and Popp’s objects are routed over the network (310) (*e.g.*, a path to/for these objects is identified). The network (310) is the common link between the client computer and the various other computers that have the information necessary to complete transactions. In disclosing such a network of computers interacting with one another over the Internet, Popp explicitly or inherently discloses object routing, as the system disclosed by Popp provides “an information channel for identifying and accessing an object.”

In addition, Popp discloses switching from a Web page to an application, or “switch[ing] to a transactional application in response to a user specification from a World Wide Web application, transmit[ing] a transaction request from the transactional application, and process[ing] the transaction request,” as the patent owner has proposed construing the phrase “value-added network switch” in the WebX Litigation. (See WebX Claim Constructions, Exh. Pg. 51.)

A more detailed discussion of some additional elements of Popp follows.

**a) Popp Implicitly Or Inherently
Discloses Compatibility With Legacy
Databases And/or Legacy Computing Systems**

Popp discloses a system that may employ a database external to the disclosed system:

Requests submitted by clients 302, 304, 306, and 308 to HTTP server 314 are transmitted to HTTP server 314 via WWW 310. HTTP server 314 runs in the corporate network 312. A client request is forwarded to application server 316 via HTTP server 314. Application server 316 runs one or more internal applications.

The present invention accommodates the needs of an internal application. For example, using the present invention an internal application can provide a dynamic user interface that can respond to user input. **Further, an internal application is**

able to access an external data source to store the application's data. State information can be retained to allow the internal application to allow the application to maintain open sessions with multiple users capable of processing multiple transactions in any order.

(Popp, Col. 8, lines 17-31.)

Preferably, an interface such as NeXT's Enterprise Objects Framework is used to **interface with an external database source**. Use of enterprise objects as an interface with a database is more fully described in U.S. patent applications entitled Method of Mapping Objects to Multiple Tables in a Relational Database (Ser. No. 08/353,522), Method for Providing Stand-in Objects (Ser. No. 08/353,523), Dynamic Object Communication Protocol (Ser. No. 08/353,524), and Method for Associating Data Containing Objects With User Interface Objects (Ser. No. 08/353,525), filed on Dec. 7, 1994, assigned to the assignee of the present invention and incorporated herein by reference.

(*Id.*, Col. 21, lines 43-54.)

Popp therefore explicitly or inherently discloses using internal applications for accessing external databases, which implicitly or inherently would include existing databases, or "legacy databases." (*See, e.g.*, '506 patent file history, April 2, 2007 Office Action, Exh. Pg. 250) ("Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.")

**b) Popp Discloses The Use Of Web
Browsers, Web Pages And/or Web Page Controls**

Popp further discloses the user of Web pages, with content that includes Web page controls allowing a user to make selections that run applications to complete transactions. These Web pages are disclosed as Netscape or Mosaic pages, or pages on another known Web service.

The components of the WWW include **browser software, network links,** and servers. The browser software, or browser, is a graphical interface (i.e., front-end) that simplifies access to the Internet. **A browser allows a client to communicate a request without having to learn a complicated command syntax.** A browser typically provides a graphical user interface (GUI) for displaying information and receiving input. Examples of browsers currently available include Mosaic, Netscape, and Cello.

(Popp, Col. 1, lines 26-34.)

A browser executing on the user's workstation receives a Web page from the Internet and sends a response containing user input via the Internet. The present invention can be used to generate Web pages in response to the user input. Thus, a user can access an application located anywhere relative to the application server by using any local workstation hardware and software platform.

(*Id.*, Col. 3, lines 59-65.)

Object instances associated with definitional elements are instantiated during execution to manage their respective portions of the **Web page. Control objects are associated with definitional elements** to facilitate the flow of information to and from external data sources.

(*Id.*, Col. 4, lines 14-18.)

Client 202 executes a browser such as Netscape or Mosaic to interface with World Wide Web (WWW) 204.

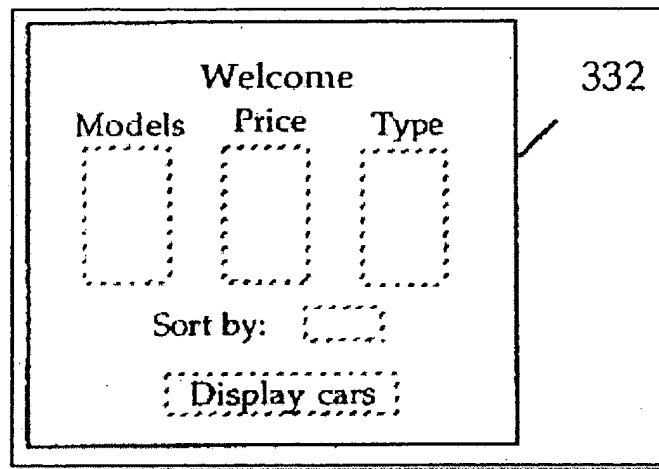
(*Id.*, Col. 6, lines 40-41.)

FIG. 3B provides **Web pages that are generated using application 320 and displayed at a client workstation** such as clients 302-308.

(*Id.*, Col. 9, lines 10-12.)

'Welcome' page 332 provides input areas that allow the shopper to identify model, price and type of the car(s) in which the shopper has some interest.

(*Id.*, Col. 9, lines 29-31.)



Popp – Fig. 3B

A shopper selects an option package (e.g., “Package D” or “Package F”), select a color for the car, or ask for a screen that contains a list of dealers that have the selected car in stock. For example, if the shopper selects a color for the car, the custom logic associated with page 335 determines that the same page definition can be used to generate a response page. An image of the car in the color selected by the shopper can be inserted into the page definition and sent to the shopper’s workstation. The browser executing on the shopper’s workstation displays Web page 336.

(*Id.*, Col. 10, lines 19-28.)

c) **Popp Discloses Database(s) Storing Information Associated With An Object, And Implicitly Or Inherently Discloses Objects Having Identities And A Unique Network Address**

(1) **Popp teaches a system for associating an object with information entries and attributes**

Popp implicitly or inherently discloses associating an object identity with information entries and attributes (e.g., Popp teaches a system for associating definitional elements with information entries and attributes associated with objects.)

Popp discloses associating object identities (*e.g.*, `app_name`, with or without `rcv_form` or `send_form`) with information entries and attributes (*e.g.*, "user-specified characteristics," objects associated with a web page.)

Further, HTTP server 206 can initiate a program identified in the URL. In the preferred embodiment, the URL specifies CGIMessenger 210 to service the client request.

CGIMessenger 210 uses the Common Gateway Interface (CGI) protocol, for example. CGIMessenger 210 can execute on the HTTP server 206 or another server connected to HTTP server 206, for example. The following provides an example of a URL:

`http://www.next.com/cgi_bin/cgimessenger/app_name/rcv_form/send_form`

The above example is for illustration only. Any URL format can be used with the present invention. The URL in the above example has multiple parts. The first part, "http:" specifies the protocol to be used. Other examples of protocol include "ftp:", "gopher:" and "wais". The next part specifies the Internet domain name of the server. In this case, the Internet domain name of the HTTP server is "www.next.com". The next part, "/cgi_bin/cgi_messenger" specifies the path and filename of the desired resource. The resource can be a file, form, or program, for example. In this case, the resource is a common gateway interface program that is used to route requests to applications. **The application that processes the client request is specified in the URL with the "app_name" specification. The names of the receiving form (*e.g.*, the form containing the client request) and the sending form (*e.g.*, a reply to the client request) can be included in the URL.**

(Popp, Col. 6, line 52 – Col. 7, line 12.)

The application name identifies the application that services the client request. If an application is specified, CGIMessenger 210 transmits the client request and corresponding information transmitted from HTTP Server 206 to application 214. Application 214 can execute on the same or different server as CGIMessenger 210 and/or HTTP Server 206, for example.

(Popp, Col. 7, lines 24-35.)

Application 320 receives the user-specified characteristics. Custom logic associated with Welcome page 332 can be used to determine the next page to be sent to the shopper.

Objects associated with the next page are initiated. Custom logic associated with the next page is executed to build a select statement to retrieve data from an external data source (*e.g.*, database server 318). To fetch the data from the external data source, the application builds a qualifier object, for example. A data source object acts as an interface to the database. A data source object has fetch, insert, update, and delete operational capabilities.

(Popp., Col. 9, lines 45-55.)

Preferably, the objects in an object tree are instantiated based on pre-defined object classes. Object classes are defined to manipulate and generate HTML elements in an HTML document. **The name of the object class can mirror the names of the corresponding HTML element to provide an easy association between the two.**

(Popp, Col. 12, lines 1-6.)

(2) **Popp teaches definitional elements (object identities) associated with a networked object**

Popp also discloses definitional elements that represent networked objects:

Further, an **internal application is able to access an external data source** to store the application's data. State information can be retained to allow the internal application to allow the application to maintain open sessions with multiple users capable of processing multiple transactions in any order.

(Popp, Col. 8, lines 26-31.)

Control objects are associated with **definitional elements** to facilitate the flow of information to and from external data sources.

(*Id.*, Col. 8, lines 53-55.)

HTTP Server 314 receives the "Welcome" page. The "Welcome" page contains a URL that specifies Automobile

Shoppers application 320. HTTP Server 314 forks a CGI interface program 322 (e.g., CGIMessenger). CGI program 322 identifies the application specified in the URL. CGI program 322 passes the shopper's input contained in the "Welcome" page to the application 320 running on application server 316 via corporate network 312.

(*Id.*, Col. 9, lines 37-44.)

The application sends the qualifier object and fetches all the data from the database. **An array of data is returned from the fetch operation. For example, the array contains all of the models of cars that are within the price range and type specifications provided by the shopper in the "Welcome" page.** Using the data retrieved from database server 318, the application along with the objects associated with the next Web page generate the definition for Web page 334.

(*Id.*, Col. 9, lines 56-63.)

Thus Popp discloses, either inherently, or implicitly, an "object identity" associated with an object that is reachable over the network.

(3) Popp further teaches storing information entries and attributes in a virtual information database

Popp discloses using a database, which could be considered a "virtual information store," to store information about an object(s).

Application 214 executes an interaction flow to satisfy the user request. Application 214 can access an external data source such as database 224. **Database 224 can be resident on the same server as application 214. Alternatively, database 224 can be resident on a separate server (e.g., a separate database server).**

(Popp, Col. 7, lines 31-35.)

The application can make use of object technology to generate client responses. For example, the elements of a Web page definition are objectified. Instances of definitional elements are instantiated during execution to manage their respective portions of the Web page. **Control objects are associated with definitional elements to facilitate the flow of information to and from external data sources.** A special

type of control referred to as a repetition control allows a group to be activated multiple times. Each activation of a group of definitional elements generates one occurrence of a repeating portion of the Web page.

(*Id.*, Col. 8, lines 49-59.)

Custom logic associated with the next page is executed to build a select statement to retrieve data from an **external data source (e.g., database server 318)**. **To fetch the data from the external data source, the application builds a qualifier object, for example. A data source object acts as an interface to the database.** A data source object has fetch, insert, update, and delete operational capabilities.

The application sends the qualifier object and **fetches all the data from the database. An array of data is returned from the fetch operation. For example, the array contains all of the models of cars that are within the price range and type specifications** provided by the shopper in the “Welcome” page.

(*Id.*, Col. 9, lines 48-61.)

Thus, Popp implicitly or inherently discloses that information regarding the various objects would be stored in a virtual information store, particularly, as WebX has construed the phrase, namely: “an information store that is temporarily created, and which contains information entries and attributes of an object.” This information can then be accessed in response to a user request. Alternatively, using a database as a virtual “store” for information regarding the various objects would have been obvious to one of ordinary skill in the art.

(4) **Popp teaches assigning a
unique network address to an object identity**

As discussed in the Payne section, Requester understands that WebX considers the phrase “unique network address” to include URLs. While Requester disagrees that such a broad reading of the claim language would be appropriate in the Litigations, WebX is not expected to argue in reexamination that URLs are beyond the scope of the claims at issue.

Popp discloses assigning a URL from the URL addressing scheme to an Internet resource, such as a file or program, and therefore necessarily discloses that an “object” has an address on the network.

An addressing scheme is employed to identify Internet resources (e.g., HTTP server, file or program). This addressing scheme is called Uniform Resource Locator (URL). A URL contains the protocol to use when accessing the server (e.g., HTTP), the Internet domain name of the site on which the server is running, the port number of the server, and the location of the resource in the file structure of the server.

(Popp, Col. 1, lines 61-67.)

5. The Rose RFC 1155 Prior Art¹⁴

The idea of a virtual information store holding information entries and attributes for an object, which has an object identity, and is reachable on a network by reference to a unique network address, elements that were added to each and every claim of the ‘506 patent to gain allowance over the prior art, was, in fact, set forth in a disclosure at least five years before Applicant’s earliest application was filed. Request for Comments 1155, entitled “Structure and Identification of Management Information for TCP/IP-based Internets,” published in May 1990 by Marshall T. Rose and Keith McCloghrie of the Network Working Group, specifically discloses creating such a “virtual information store” to allow easy reference for objects having names and specific attributes, and ready access to these by using a unique identifier setting forth the location of this object on the global network.

¹⁴ Rose was neither cited by the Applicant, nor cited or relied upon by the Examiner during prosecution of the ‘506 patent. See Section IV.C.SNQ 8, below.

a) **Rose RFC 1155 Discloses A Virtual Information Store
That Contains Information About Networked Objects**

Rose RFC 1155 begins by describing the basis for allowing easy accessibility to objects on a TCP/IP-based network, such as the Internet, through a “virtual information store”:

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using Abstract Syntax Notation One (ASN.1) [1].

(Rose RFC 1155, Pg. 4.)

b) **Rose RFC 1155 Discloses Both A Name
And A Unique Identifier For Networked
Objects Assigned A Unique Network Address**

(1) **Object Identifier**

Rose RFC 1155 further describes how the objects are to be identified, so as to be universally accessible by users on a TCP/IP-based network, such as the Internet. Specifically, each object is associated with unique identifier, so that it can be distinguished from other objects on the network (“object identifier”). These identifiers also include information regarding where on the global network tree the object is located (i.e., which specific node(s) need to be traversed to reach the object):

Each type of object (termed an object type) has a name, a syntax, and an encoding. The name is represented uniquely as an OBJECT IDENTIFIER. An OBJECT IDENTIFIER is an administratively assigned name. The administrative policies used for assigning names are discussed later in this memo.

(Rose RFC 1155, Pg. 4.)

3.1. Names

Names are used to identify managed objects. This memo specifies names which are **hierarchical in nature**. The OBJECT IDENTIFIER concept is used to model this notion.

An OBJECT IDENTIFIER can be used for purposes other than naming managed object types; for example, each international standard has an OBJECT IDENTIFIER assigned to it for the purposes of identification. In short, **OBJECT IDENTIFIERS are a means for identifying some object, regardless of the semantics associated with the object (e.g., a network object, a standards document, etc.)**

An OBJECT IDENTIFIER is a sequence of integers which traverse a global tree. The tree consists of a root connected to a number of labeled nodes via edges. Each node may, in turn, have children of its own which are labeled. In this case, we may term the node a subtree. **This process may continue to an arbitrary level of depth.**

(*Id.*, Pgs. 4-5.)

A collection of object types is defined in the MIB. **Each such subject type is uniquely named by its OBJECT IDENTIFIER and also has a textual name, which is its OBJECT DESCRIPTOR.**

(*Id.*, Pg. 11.)

(2) Unique Network Address

Further, Rose discloses a syntax for defining network addresses for objects:

3.2. Syntax

Syntax is used to define the structure corresponding to object types. ASN.1 constructs are used to define this structure, although the full generality of ASN.1 is not permitted.

...

3.2.3.1. NetworkAddress

This CHOICE represents an address from one of possibly several protocol families. Currently, only one protocol family, the **Internet** family, is present in this CHOICE.

3.2.3.2. IpAddress

This application-wide type represents a **32-bit internet address**. It is represented as an OCTET STRING of length 4, in network byte-order.

(*Id.*, Pgs. 7-8.) Rose discloses several ways that object instances, stored in a MIB, are assigned a network address. For example, it discloses the object types "atNet Address," "atEntry", and "atTable," which are assigned network addresses.

An object type may be defined in the MIB such that an instance of that object type represents an aggregation of information also represented by instances of some number of "subordinate" object types. For example, suppose the following object types are defined in the MIB:

.....

OBJECT:

atNetAddress { atEntry 3 }

Syntax:

NetworkAddress

Definition:

The network address corresponding to the media-dependent physical address.

Access:

read-write.

Status:

mandatory.

Then, a fourth object type might also be defined in the MIB:

OBJECT:

atEntry { atTable 1 }

Syntax:

AtEntry ::= SEQUENCE {
atIndex
INTEGER,
atPhysAddress
OCTET STRING,
atNetAddress
NetworkAddress
}

Definition:

An entry in the address translation table.

Access:

read-write.

Status:

mandatory.

Each instance of this object type comprises information represented by instances of the former three object types. An object type defined in this way is called a list.

Similarly, tables can be formed by aggregations of a list type. For example, a fifth object type might also be defined in the MIB:

OBJECT:

atTable { at 1 }

Syntax:

SEQUENCE OF AtEntry

Definition:

The address translation table.

Access:

read-write.

Status:

mandatory.

such that each instance of the atTable object comprises information represented by the set of atEntry object types that collectively constitute a given atTable object instance, that is, a given address translation table.

Consider how one might refer to a simple object within a table. Continuing with the previous example, **one might name the object type**

{ atPhysAddress }

and specify, using a protocol-specific mechanism, the object instance

{ atNetAddress } = { internet "10.0.0.52" }

This pairing of object type and object instance would refer to all instances of atPhysAddress which are part of any entry in some address translation table for which the associated atNetAddress value is { internet "10.0.0.52" }.

To continue with this example, consider how one might refer to an aggregate object (list) within a table. Naming the object type { atEntry } and specifying, using a protocol-specific mechanism, the object instance

{ atNetAddress } = { internet "10.0.0.52" }

refers to all instances of entries in the table for which the associated `atNetAddress` value is { internet "10.0.0.52" }.

(*Id.*, pgs. 11-13.)

c) **Rose RFC 1155 Also Discloses That
The Virtual Information Store
Contains Attributes And Information Entries**

The Virtual Information store also holds information about the type of object that are represented therein by the unique identifier, including characteristics that are specific to the object, such as the syntax, the object type, and the instantiation, which is simply information about the object's type, bound to a value representing that object instance:

The syntax for an object type defines the abstract data structure corresponding to that object type. For example, the structure of a given object type might be an INTEGER or OCTET STRING. Although in general, we should permit any ASN.1 construct to be available for use in defining the syntax of an object type, this memo purposely restricts the ASN.1 constructs which may be used. These restrictions are made solely for the sake of simplicity.

(Rose, Pg. 4.)

The encoding of an object type is simply how instances of that object type are represented using the object's type syntax. Implicitly tied to the notion of an object's syntax and encoding is how the object is represented when being transmitted on the network. This memo specifies the use of the basic encoding rules of ASN.1 [7].

(*Id.*)

Rose RFC 1155's object type itself has various attributes, which themselves each have values (information entries). Some examples of these are the "access" and "status" attributes that form part of the object type. The attribute, "Access," for example may have values of "read-only, read-write, write-only, or not accessible." These values, when entered as an attribute for a given object, constitute "information entries."

An object type definition consists of five fields:

OBJECT:

A textual name, termed the OBJECT DESCRIPTOR, for the object type, along with its corresponding OBJECT IDENTIFIER.

Syntax:

The abstract syntax for the object type. This must resolve to an instance of the ASN.1 type ObjectSyntax (defined below).

Definition:

A textual description of the semantics of the object type. Implementations should ensure that their instance of the object fulfills this definition since this MIB is intended for use in multi-vendor environments. As such it is vital that objects have consistent meaning across all machines.

Access:

One of read-only, read-write, write-only, or not-accessible.

Status:

One of mandatory, optional, or obsolete.

(*Id.*, Pg. 10.)

An object type is a definition of a kind of managed object; it is declarative in nature. In contrast, an object instance is an instantiation of an object type which has been bound to a value. For example, the notion of an entry in a routing table might be defined in the MIB. Such a notion corresponds to an object type; individual entries in a particular routing table which exist at some time are object instances of that object type.

(*Id.*, Pgs. 10-11.)

6. The McCloghrie RFC 1213 Prior Art¹⁵

Elements reciting a virtual information store holding information entries and attributes for an object, which has an object identity, and is reachable on a network by reference to a unique network address, were added to each and every claim of the '506 patent to gain allowance over the prior art. These elements were set forth years before the first application to which the '506 patent claims priority, in language strikingly similar to that used by Applicant in her application and claims. Request for Comments 1213, entitled "Management Information Base for Network Management of TCP/IP-based internets: MIB-II," published in March 1991 by Keith McCloghrie and Marshall T. Rose (primary author of the Rose RFC 1155 reference, above) of the Network Working Group, specifically discloses creating such a "virtual information store" to allow easy reference for objects having names and specific attributes, and ready access to these by using a unique identifier setting forth the location of each object on the global network.

Like Rose RFC 1155, this RFC relates to a standard for storing information about internet network objects in a management information base (MIB.) This RFC, whose primary author, McCloghrie was also a co-author on the Rose RFC 1155 prior art, addresses standards for dealing with MIB-II, the second generation Management Information Base that was an extension of the original MIB-I discussed in Rose RFC 1155.

The managed nodes discussed in this RFC, as well as the Rose RFC 1155, above, and the McCloghrie RFC 1447, below, were to be managed using the SNMP protocol, which allowed network management technology to be fielded not only in the research community, but for commercial applications, as well:

¹⁵ McCloghrie 1213 was neither cited by the Applicant, nor cited or relied upon by the Examiner during prosecution of the '506 patent. See Section IV.C.SNQ 9, below.

As reported in RFC 1052, IAB Recommendations for the Development of Internet Network Management Standards [1], a two-prong strategy for network management of TCP/IP-based internets was undertaken. **In the short-term, the Simple Network Management Protocol (SNMP) was to be used to manage nodes in the Internet community. . . .**

This strategy was quite successful in the short-term: **Internet-based network management technology was fielded, by both the research and commercial communities, within a few months.** As a result of this, **portions of the Internet community became network manageable** in a timely fashion.

As reported in RFC 1109, Report of the Second Ad Hoc Network Management Review Group [4], the requirements of the SNMP and the OSI network management frameworks were more different than anticipated.

As such, the requirement for compatibility between the SMI/MIB and both frameworks was suspended. **This action permitted the operational network management framework, the SNMP, to respond to new operational needs in the Internet community by producing this document.**

(McCloghrie RFC 1213, Pgs. 2-3, ¶ 2.)

a) **McCloghrie RFC 1213 Describes Networked Objects Represented With An Object Identity**

McCloghrie RFC 1213 discloses a protocol that is “used to manage nodes in the Internet community.” (McCloghrie RFC 1213, Pg. 2, ¶ 2.) In particular, McCloghrie RFC 1213 describes a “network management framework” including “managed objects” with descriptions of “how managed objects...are defined,” and “the protocol used to manage these objects.” (McCloghrie RFC 1213, Pg. 3, ¶ 2.)

To represent a networked object, the ‘506 patent uses an object identity that specifies an object type for an object that is transmitted over a network. (‘506 patent, claims 1, 14, 15 and 16; *see also id.*, Col. 9, lines 3-15.) RFC 1213 describes managed objects having this same object identity in nearly identical words, as shown below.

	'506 patent	McCloghrie RFC 1213
object identity	<p>"[E]ach object...has a name, a syntax and an encoding. The name is an administratively assigned object ID specifying an object type. The object type together with the object instance serves to uniquely identify a specific instantiation of the object."</p> <p>('506 patent, Col. 9, lines 3-7; <i>see also</i> claims 1, 14, 15, and 16.)</p>	<p>"[E]ach object has a name, a syntax and an encoding. The name is an object identifier, an administratively assigned name, which specifies an object type. The object type together with an object instance serves to uniquely identify a specific instantiation of the object."</p> <p>(McCloghrie RFC 1213, Pg. 10, ¶ 4.)</p>

Thus, McCloghrie RFC 1213, which was published more than four years before the earliest possible effective date of the '506 patent, discloses object identities that represent networked objects, as recited, directly or indirectly, by all of the claims of the '506 patent.

**b) McCloghrie RFC 1213 Discloses A
Virtual Information Store That Contains
Objects' Information Entries And Attributes**

The '506 patent discloses distributed on-line service information bases (DOLSIBs) of data associated with networked objects. According to the '506 patent:

DOLSIBs are virtual information stores optimized for networking. All information entries and attributes in a DOLSIB virtual information store are associated with a networked object identity. The networked object identity identifies the information entries and attributes in the DOLSIB as individual networked objects

('506 patent, Col. 8, lines 48-54.)

Likewise, McCloghrie RFC 1213 describes a management information base (MIB) containing data about managed objects. In particular, the reference explains that "[m]anaged objects are accessed via a virtual information store, termed the Management Information

Base or MIB.” (McCloghrie RFC 1213, Pg. 10, ¶ 4.) Information entries and attributes associated with object identities are stored in the virtual information store disclosed in the reference. For example, in the specification below, the object identifier “{system 3}” is associated with information entries and attributes, *e.g.*, a particular integer value representing the uptime of a particular computer system.

```
sysUpTime OBJECT-TYPE
    SYNTAX  TimeTicks
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
        "The time (in hundredths of a second) since the
        network management portion of the system was last
        re-initialized."
    ::= { system 3 }
```

(*Id.*, Pg. 14, ¶ 6.) This integer value is “contained in” a virtual information store, or MIB, as described in McCloghrie RFC 1213.

As another example, the object identifier “{system 7}” is associated with information entries and attributes (*e.g.*, a particular integer value representing the set of services primarily offered by the entity):

sysServices OBJECT-TYPE

SYNTAX INTEGER (0..127)

ACCESS read-only

STATUS mandatory

DESCRIPTION

"A value which indicates the set of services that this entity primarily offers.

The value is a sum. This sum initially takes the value zero. Then, for each layer, L, in the range 1 through 7, that this node performs transactions for, 2 raised to (L - 1) is added to the sum. For example, a node which performs primarily routing functions would have a value of 4 ($2^{(3-1)}$). In contrast, a node which is a host offering application services would have a value of 72 ($2^{(4-1)} + 2^{(7-1)}$). Note that in the context of the Internet suite of protocols, values should be calculated accordingly:

layer	functionality
1	physical (e.g., repeaters)
2	datalink/subnetwork (e.g., bridges)
3	internet (e.g., IP gateways)
4	end-to-end (e.g., IP hosts)
7	applications (e.g., mail relays)

For systems including OSI protocols, layers 5 and 6 may also be counted."

::= { system 7 }

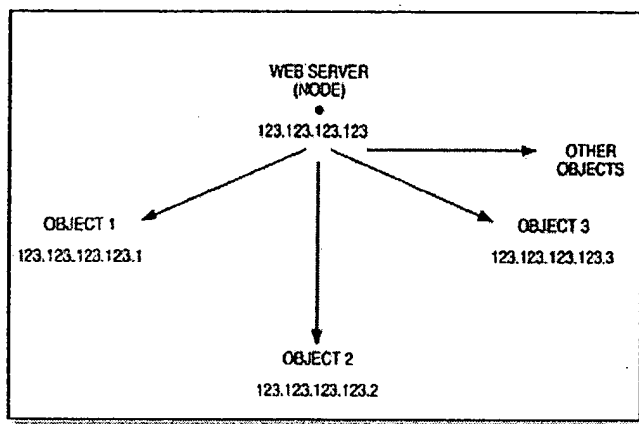
(Id., Pg. 15, ¶ 6.)

This integer value is "contained in" a virtual information store, or MIB, as described in McCloghrie RFC 1213. Thus, McCloghrie RFC 1213 describes a "virtual information store" containing object identities and associated information entries and attributes.

c) **McCloghrie RFC 1213 Discloses Both
A Name And A Unique Identifier For
Networked Objects Assigned A Unique Network Address**

McCloghrie RFC 1213 further describes how the objects are to be identified, so as to be universally accessible by users on a TCP/IP-based network, such as the Internet.

The '506 patent describes "assigning a unique network address" to an object identity. ('506 patent, claims 1, 14, 15, and 16.) "[E]ach networked object is assigned an Internet address. The Internet address is assigned based on the IP address of the node at which the networked object resides." ('506 patent, Col. 8, lines 54-57.)



'506 patent – Fig. 6B

Figure 6B of the '506 patent, reproduced above, depicts "an example of this hierarchical addressing tree structure." ('506 patent, Col. 9, lines 1-2.) "Web server 104 is a node on the Internet, with an IP address. The '506 patent further states:

All networked object[s] associated with Web server 104 will therefore be assigned an Internet address based on the Web server 104's IP address. These networked objects thus 'branch' from the node, creating a hierarchical tree structure.

('506 patent, Col. 8, lines 59-63; *see also id.*, Fig. 5A.) The root of the tree described in Figure 6B of the '506 patent is assigned the address 123.123.123.123. To identify Object 1, which branches from the root node, the addressing scheme of the '506 patent appends the number 1 to the root node address to assign 123.123.123.123.1 to the object. To identify Object 2, which branches from the root node, the addressing scheme of the '506 patent appends the number 2 to the root node address to assign 123.123.123.123.2 to the object. (See '506 patent, Fig. 5A.)

Similarly, McCloghrie RFC 1213 describes a hierarchical scheme for assigning unique network addresses to object identifiers. For example, McCloghrie RFC 1213 discloses unique network addresses that comprise IP addresses. For instance, the reference discloses a table that uses an IP address assigned to an object identity as an index into the table.

```
-- the IP address table

-- The IP address table contains this entity's IP addressing
-- information.

ipAddrTable OBJECT-TYPE
    SYNTAX SEQUENCE OF IpAddrEntry
    ACCESS not-accessible
    STATUS mandatory
    DESCRIPTION
        "The table of addressing information relevant to
        this entity's IP addresses."
    ::= { ip 20 }

ipAddrEntry OBJECT-TYPE
    SYNTAX IpAddrEntry
    ACCESS not-accessible
    STATUS mandatory
    DESCRIPTION
        "The addressing information for one of this
        entity's IP addresses."
    INDEX { ipAddrTable 1 }
    ::= { ipAddrTable 1 }

IpAddrEntry ::=
    SEQUENCE {
        ipAdEntAddr
            IpAddress,
        ipAdEntIfIndex
            INTEGER,
        ipAdEntNetMask
            IpAddress,
        ipAdEntBcastAddr
            INTEGER,
        ipAdEntReasmMaxSize
            INTEGER (0..65535)
    }

ipAdEntAddr OBJECT-TYPE
    SYNTAX IpAddress
    ACCESS read-only
    STATUS mandatory
    DESCRIPTION
        "The IP address to which this entry's addressing
        information pertains."
    ::= { ipAddrEntry 1 }
```

(McCloghrie RFC 1213, Pg. 31, ¶ 6) (highlighting added.)

The object type "ipAddrEntry," described as "[t]he addressing information for one of this entity's IP addresses," uses "ipAdEntAddr" as an index. In turn, "ipAdEntAddr" is

described as “[t]he IP address to which this entry’s addressing information pertains.” (*Id.*)

In this situation, a unique network address, comprising an IP address, is assigned to the object identity.

For example, the table named ipAddrTable contains an ipAdEntNetMask object for each IP address in the table. To access the ipAdEntNetMask object for the IP address 207.155.248.31, one would use the object identifier of the IP address table (1.3.6.1.2.4.20), append “1” to reach the ipAddrEntry object, append “3” to reach the ipAdEntMask object, and further append the IP address “207.155.248.31.” This process of appending integers leads to the complete object identifier for the ipAdEntNetMask object of interest, the dotted-decimal string 1.3.6.1.2.4.20.1.3.207.155.248.31.

Thus, McCloghrie RFC 1213 describes assigning a unique network address to object identities representing networked objects.

7. The Miller Prior Art¹⁶

Managing Internetworks with SNMP by Mark A. Miller (“Miller”) was published by M&T Books in 1993. Miller explains that in SNMP (the subject of McCloghrie RFC 1213), the way to use an IP address as an index is to append it to an object identifier. Miller is therefore used to explain the meaning of “index” in McCloghrie RFC 1213 and to show that the appending of IP addresses to object identifiers is inherent in McCloghrie RFC 1213.

In particular, Miller provides a contemporaneous description of appending an IP address to an object identifier to access an object in the table “ipAddrTable”:

¹⁶ Miller was neither cited by the Applicant, nor cited or relied upon by the Examiner during prosecution of the ‘506 patent. See Section IV.C.SNQ 11 SNQ 8, below.

BcastAddr (4), shown in Figure 4-4a. Next, the destination route is added as a suffix, that is, a.b.c.d. (More on IP addresses and dotted decimal notation in Section 5.3.) The variable name for ipAdEntBcastAddr associated with IP Address a.b.c.d would therefore be [1.3.6.1.2.1.4.20.1.4.a.b.c.d].

(Miller, Pg. 138.)

8. The McCloghrie RFC 1447 Prior Art¹⁷

Like McCloghrie RFC 1213, McCloghrie RFC 1447, entitled “Party MIB for version 2 of the Simple Network Management Protocol (SNMPv2),” Network Working Group Request for Comments No. 1447, published April 1993 by Keith McCloghrie (primary author of the McCloghrie RFC 1213 reference, above) and James T. Galvin of the Network Working Group, discloses assigning a unique network address to an object identity representing a networked object.

Both McCloghrie RFC 1213 and McCloghrie RFC 1447 disclose SNMP examples meeting the unique network address claim elements. The differences between the two examples are minor. McCloghrie RFC 1213 discloses an example with the IP address appended on the right, while McCloghrie RFC 1447 discloses an example with the IP address to the left, with an extra integer on the right, as in Figure 6B of the ‘506 patent.¹⁸

¹⁷ McCloghrie RFC 1447 was neither cited by the Applicant, nor cited or relied upon by the Examiner during prosecution of the ‘506 patent. See Section IV.C.SNQ 10, below.

¹⁸ Under their broadest reasonable interpretation standard for reexamination, the claims of the ‘506 patent do not require any particular ordering of the IP address relative to other integers within the dotted-decimal strings of a “unique network address,” and do not even necessarily require an IP-reachable “unique network address.” Therefore, the unique network address examples in both McCloghrie 1213 and 1447 satisfy this claim element in the ‘506 patent.

McCloghrie RFC 1447 discloses initialPartyID objects, whose values are object identifiers. As the excerpt below explains, initialPartyID corresponds to a branch (a subtree) of a hierarchical tree.

```
-- Definition of Initial Party and Context Identifiers

-- When devices are installed, they need to be configured
-- with an initial set of SNMPv2 parties and contexts. The
-- configuration of SNMPv2 parties and contexts requires (among
-- other things) the assignment of several OBJECT IDENTIFIERS.
-- Any local network administration can obtain the delegated
-- authority necessary to assign its own OBJECT IDENTIFIERS.
-- However, to provide for those administrations who have not
-- obtained the necessary authority, this document allocates a
-- branch of the naming tree for use with the following
-- conventions.

initialPartyId OBJECT IDENTIFIER ::= { partyAdmin 3 }
```

(McCloghrie RFC 1447, Pg. 8, ¶ 2) (highlighting added.)

The initialPartyID object is used in conjunction with the IP address of the configured device, represented below as a.b.c.d (an IP address).

```
-- Party Identifiers for use as initial SNMPv2 parties
-- at IP address a.b.c.d

-- Note that for all OBJECT IDENTIFIERS assigned under
-- initialPartyId, the four sub-identifiers immediately
-- following initialPartyId represent the four octets of
-- an IP address. Initial party identifiers for other address
-- families are assigned under a different OBJECT IDENTIFIER,
-- as defined elsewhere.
```

(Id., Pg. 9, ¶ 2) (highlighting added.)

For instance, in the example below, a party-based security profile corresponds to an object at the a.b.c.d.1 node of the a.b.c.d subtree. Just as in figure 6B in the patent, the dotted decimal string associated with each object includes the IP address of the parent node plus an extra integer appended on the right of the IP address.

```
--      a noAuth/noPriv party which executes at the agent
-- partyIdentity      = { initialPartyId a.b.c.d.1 }
-- partyIndex         = 1
-- partyTDomain       = anmpUDPDomain
-- partyTAddress      = a.b.c.d, 161
-- partyLocal         = true (in agent's database)
-- partyAuthProtocol  = noAuth
-- partyAuthClock     = 0
-- partyAuthPrivate   = ''H      (the empty string)
-- partyAuthPublic    = ''H      (the empty string)
-- partyAuthLifetime  = 0
-- partyPrivProtocol  = noPriv
-- partyPrivPrivate   = ''H      (the empty string)
-- partyPrivPublic    = ''H      (the empty string)
```

(Id, Pg. 10, ¶ 2) (highlighting added.)

IV. STATEMENT IDENTIFYING EACH SUBSTANTIAL NEW QUESTION OF PATENTABILITY PURSUANT TO 37 C.F.R. § 1.915(B)(3)

Pursuant to 37 C.F.R. § 1.915(b)(3), Requester provides below (and as supported by the claim chart mappings in Appendices A-C) “[a] statement pointing out each substantial new question of patentability based on the cited patents and printed publications, and a detailed explanation of the pertinency and manner of applying the patents and printed publications to every claim for which reexamination is requested.”

A. Legal Standards For Reexamination

A request for an *inter parties* reexamination is appropriately granted where the Requester demonstrates the existence of a substantial new question of patentability for at least one claim of the patent. *See* Manual of Patent Examining Procedure (MPEP), Section 2642(I). Section 2642(I) sets forth the standard for this determination (emphasis in original):

A prior art patent or printed publication raises a substantial question of patentability where there is a substantial likelihood that a reasonable Examiner would consider the prior art patent or printed publication **important** in deciding whether or not the claim is patentable. If the prior art patents and/or publications would be considered important, then the Examiner should find “a substantial new question of patentability” unless the same question of patentability has already been decided as to the claim in a final holding of invalidity by the Federal court system or by the Office in a previous examination.

Patents and/or printed publications already cited/considered in an earlier concluded examination may also raise substantial new questions of patentability where such patents/printed publications are being presented or viewed in a new light, or in a different way, as compared with their use or understanding in earlier concluded examination(s), and are submitted as invalidating prior art references based on new arguments and/or interpretations contained in the reexamination Request. *See* MPEP § 2642(II)(A), citing *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351 (Bd. Pat. App. & Inter. 1984).

Finally, consistent with initial examinations, the scope given to claim language during reexamination is broad: “During reexamination, claims are given the broadest reasonable interpretation consistent with the specification and limitations in the specification are not read into the claims. (*In re Yamamoto*, 211 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984)).” MPEP § 2258.I.G.

Each claim of the ‘506 patent should be rejected for the reasons identified in the following two sections and in the supporting claim charts that that are referenced in Section V and attached as Appendices A-C to this Request.

B. Rejections Under 35 U.S.C. § 102(e)

The following is a quotation of 35 U.S.C. § 102(e), which forms the basis for all anticipation rejections:

A person shall be entitled to a patent unless . . .

(e) the invention was described in . . . a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent . . .

SNQ 1. Payne**Claims 1-19 of the '506 patent are anticipated by Payne.**

A substantial new question is raised by Payne as to Claims 1-19 of the '506 patent. Although it is prior art of record in the '506 patent, Payne's teachings as discussed below were not relied upon during the '506 patent's prior examination. Payne was never relied upon in the rejection of any claims, nor was it even discussed during the original examination, thus it may properly be considered as "old art" that is being presented in a new light. See MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Payne anticipates each and every limitation of Claims 1-19. For this reason, Payne raises a substantial new question of patentability with respect to Claims 1-19.

(1) **Claim 1.**¹⁹ As set forth in Claim 1, Payne discloses a method for providing a service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16; Col. 10, lines 9-20) (*'519 Application*: Pg. 11, lines 7-19.) Payne further discloses sending first display information from a first computer system (*e.g.*, a merchant computer) to a user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) (*'519 Application*: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (*e.g.*, a hypertext link allowing the user to

¹⁹ As previously stated, Applicant's claims are being construed in a manner consistent with the proposed constructions asserted by the purported patent owner in the WebX Litigation, and Requester does not admit that they would be appropriate in the Litigations or in any venue that does not apply the broadest reasonable interpretation standard applied during reexamination.

purchase a product) (Payne: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) Payne further discloses accepting a first signal in response to a user input to activate the control (*e.g.*, upon selecting a product, Payne teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (Payne: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.)²⁰ Payne also discloses initiating, in response to the first signal (*e.g.*, in response to the buyer selecting a product for purchase), communication between the user device (*e.g.*, the buyer computer) and a second computer system (*e.g.*, the payment computer) (Payne: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) Payne further discloses using the second computer system (*e.g.*, payment computer) for sending second display information to the user device (*e.g.*, the buyer computer) (Payne: Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application*: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (Payne: Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (*e.g.*, Payne teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (Payne: Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.)

²⁰ The discussion of the elements added by Applicant to overcome the original Examiner's rejection of Applicant's claims over Popp (namely, "associating an object identity with information entries and attributes, wherein the object identity represents a networked object," "storing said information entries and said attributes in a virtual information store," and "assigning a unique network address to said object identity") are, throughout the remainder of the document, discussed at the end of each independent claim, regardless of the actual locations of those elements in the claims as issued. Payne thus anticipates the claims as originally drafted, without these added elements, and also anticipates the claims as issued, with the elements Applicant added for claim allowance.

Payne further discloses completing a commercial transaction relating to the selected commercial service (*e.g.*, Payne teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, Payne discloses associating an object identity with information entries and attributes (*e.g.*, Payne teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, Payne teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) Payne further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, Payne teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (*e.g.*, Payne teaches

using unique network addresses (i.e., URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*'519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (*See Appendix A, Elements 1-13.*)

(2) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, *Payne* further discloses that the second computer system (*e.g.*, the payment computer) includes an object router (*e.g.*, the payment computer is capable of locating and accessing objects on the network) (*Payne*: Figs. 2F, 2G; Appendix E, page beginning with “Encoding payment orders in URLs,” Exh. Pg. 128) (*'519 Application*: Pg. 3, lines 11-14; Pg. 19, lines 15-23; Fig. 13; Pg. 23, lines 1-7; Fig. 14; Pg. 24, lines 16-24.) (*See Appendix A, Element 14.*)

(3) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, *Payne* further discloses that the second computer system (*e.g.*, the payment computer) includes a virtual information store (*Payne*: Col. 3, lines 47-51; Col. 5, lines 11-15; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136) (*'519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) (*See Appendix A, Element 15.*)

(4) **Claim 4.** Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, *Payne* further discloses that the second computer system (*e.g.*, the payment computer) includes a value-added network switch (*e.g.*, when a user selects a Web page control, such as clicking on a hyperlink to complete a payment transaction, a request is sent to switch from the Web application, or the Web page containing the link, to a transactional application, such

as an application which checks the status of a user account, which application then processes and acts in response to a user request) (*'519 Application*: Pg. 3, lines 11-14; Pg. 19, lines 15-23; Figs. 13-14; Pg. 23, lines 1-7; Pg. 24, lines 16-24; Pg. 13, line 24 – Pg. 14, line 8.)

Additionally, such a switch is inherent in Payne's disclosure of clicking on Web page links to invoke applications. (*See Appendix A, Element 16.*)

(5) **Claim 5.** Claim 5 depends upon Claim 1. (*See above.*) As set forth in Claim 5, Payne further discloses that the second computer system includes a legacy database (*e.g.*, Payne teaches using an "existing financial system network" with information about existing accounts, which inherently would involve the use of existing, or "legacy" databases containing such information) (*'519 Application*: Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Col. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.) (*See Appendix A, Element 17.*)

(6) **Claim 6.** Claim 6 depends upon Claim 1. (*See above.*) As set forth in Claim 6, Payne further discloses a control that includes a Web page control (*e.g.*, using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages, such as Mosaic pages) (*Payne*: Col. 10, lines 9-20; Col. 5, lines 26-27; Col. 6, lines 5-15; Figs. 5-14; Appendix A, Exh. Pg. 38; Appendix E, page entitled "Shopping Cart Mechanism; how to write payment and shopping cart URLs," Exh. Pg. 130) (*'519 Application*: Pg. 11, lines 7-19; Pg. 12, lines 1-6, 15-18; Figs. 2-5, 8-11.) (*See Appendix A, Element 18.*)

(7) **Claim 7.** Claim 7 depends upon Claim 1. (*See above.*) As set forth in Claim 7, Payne further discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*e.g.*, the merchant computer and payment computer are owned and/or operated by different corporate entities, and therefore in different corporate "networks," though they operate on a common network,

namely, the Internet). (*Payne*: Col. 4, lines 35-45) (*'519 Application*: Pg. 1, lines 19-22; Pg. 2, line 23 – Pg. 3, line 2; Pg. 3, lines 11-14; Pg. 4, lines 8-23:) (*See Appendix A, Element 19.*)

(8) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, *Payne* further discloses that the first corporate network (*e.g.*, the merchant computer) is operated by a first business entity and the second corporate network (the payment computer) is operated by a second business entity (*e.g.*, *Payne* teaches having a merchant avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant, indicating that the merchant and entity making payment to the merchant are separate entities; *Payne* further teaches that the merchant computer and the payment computer may be operated by separate entities, thus implicitly or inherently disclosing separate “corporate networks”) (*Payne*: Col. 4, lines 35-45) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.) (*See Appendix A, Element 20.*)

(9) **Claim 9.** Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, *Payne* further discloses that the second computer system includes a legacy computing system (*e.g.*, *Payne* teaches using an “existing financial system network” with information about existing accounts, which inherently would involve the use of existing, or “legacy” computer systems containing such information) (*'519 Application*: Pg. 2, lines 8-13. 18-20; Pg. 2, line 23 – Pg. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.) (*See Appendix A, Element 21.*)

(10) **Claim 10.** Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, *Payne* further discloses that the user device includes a Web browser (*Payne*: Col.

1, lines 15-17; Col. 4, lines 43-45; Col. 5, lines 27-30; Col. 10, lines 9-20; Figs. 5-14) ('519 Application: Pg. 11, lines 7-19; Figs. 2-5 and 8-11.) (See Appendix A, Element 22.)

(11) **Claim 11.** Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Payne further discloses that the display information includes Web page content (e.g., Payne teaches using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages, or Web page content) (Payne: Col. 10, lines 9-20; Appendix A, Exh. Pg. 38; Appendix E, page entitled "Shopping Cart Mechanism; how to write payment and shopping cart URLs," Exh. Pg. 130; Figs. 5-14) ('519 Application: Pg. 11, lines 7-19; Pg. 12, lines 1-6; Pg. 12, lines 15-18; Figs. 2-5 and 8-11.) (See Appendix A, Element 23.)

(12) **Claim 12.** Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Payne further discloses that the list of at least one commercial service includes a payment service (e.g., Payne provides an option of opening an account to make payments, as well as making a payment using such an account) (Payne: Col. 6, lines 1-14, 15-30, 31-42; Col. 6, line 43 – Col. 7, line 50.) (See Appendix A, Element 24.)

(13) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Payne further discloses that the user is provided with access to a payment electronic back office system (e.g., Payne teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) ('519 Application: Pg. 2, lines 18-20; Pg. 5, lines 12-15; Pg. 8, lines 3-5.) (See Appendix A, Element 24.)

(14) **Claim 14.** As set forth in Claim 14, Payne discloses an apparatus for providing a service over a digital network. (Payne: Title; Abstract; Col.1, lines 14-16) ('519 Application: Pg. 11, lines 7-19.) Payne further discloses a processor (e.g., Payne teaches

multiple computers which are capable of processing instructions, and therefore explicitly or inherently discloses processors) (*Payne*: Col. 2, lines 43-65; Col. 3, lines 38-42; Col. 8, lines 25-31.) *Payne* further discloses a machine-readable storage device including one or more instructions executable by the processor (*e.g.*, *Payne* discloses computers which have access to databases for storage of information, and further discloses those computers executing or processing instructions) (*Payne*: Col. 2, lines 43-65; Col. 3, lines 38-42; Col. 4, lines 52-65; Fig. 1) (*'519 Application*: Pg. 10, line 23 – Pg. 11, line 2) for sending first display information from a first computer system (*e.g.*, a merchant computer) to a user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) (*'519 Application*: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (*e.g.*, a hypertext link allowing the user to purchase a product) (*Payne*: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) *Payne* further discloses accepting a first signal in response to a user input to activate the control (*e.g.*, upon selecting a product, *Payne* teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.) *Payne* also discloses initiating, in response to the first signal (*e.g.*, in response to the buyer selecting a product for purchase), communication between the user device (*e.g.*, the buyer computer) and a second computer system (*e.g.*, the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) *Payne* further discloses using the second computer system (*e.g.*, payment computer) for sending second display information to the user device (*e.g.*, the buyer computer) (*Payne*: Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519*

Application: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne:* Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (*e.g.*, *Payne* teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne:* Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.) *Payne* further discloses completing a commercial transaction relating to the selected commercial service (*e.g.*, *Payne* teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase with that account, which is also a commercial service) (*Payne:* Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, *Payne* discloses associating an object identity with information entries and attributes (*e.g.*, *Payne* teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne:* Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application:* Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne:* Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application:* Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) *Payne* further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, *Payne* teaches

storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled "CustItemEntryPage.cgi," Exh. Pg. 164.) ('519 Application': Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) *Payne* further discloses assigning a unique network address to said object identity (e.g., *Payne* teaches using unique network addresses (i.e., URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) ('519 Application': Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (See Appendix A, Elements 26-40.)

(15) **Claim 15.** As set forth in Claim 15, *Payne* discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (e.g., *Payne* teaches computers which have access to databases for storage of information, and further discloses computers which are capable of processing instructions, and therefore explicitly or inherently discloses processors for providing a commercial service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16, 24-27; Col. 2, lines 43-65; Col. 3, lines 29-34, 38-42; Col. 4, lines 52-65; Col. 5, lines 16-25; Col. 8, lines 25-31; Fig. 1) ('519 Application': Pg. 11, lines 7-19, 20-22; Pg. 10, line 23 – Pg. 11, line 2.) *Payne* further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system (e.g., a merchant computer) to a user device (e.g., a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) ('519

Application: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (e.g., a hypertext link allowing the user to purchase a product) (*Payne:* Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application:* Pg. 11, lines 20-24.) *Payne* further discloses accepting a first signal in response to a user input to activate the control (e.g., upon selecting a product, *Payne* teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne:* Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application:* Pg. 11, lines 20-24.) *Payne* also discloses initiating, in response to the first signal (e.g., in response to the buyer selecting a product for purchase), communication between the user device (e.g., the buyer computer) and a second computer system (e.g., the payment computer) (*Payne:* Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application:* Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) *Payne* further discloses using the second computer system (e.g., payment computer) for sending second display information to the user device (e.g., the buyer computer) (*Payne:* Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application:* Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne:* Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (e.g., *Payne* teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne:* Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.) *Payne* further discloses completing a commercial transaction relating to the selected commercial service (e.g., *Payne* teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase

with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, *Payne* discloses associating an object identity with information entries and attributes (*e.g.*, *Payne* teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) *Payne* further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, *Payne* teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) *Payne* further discloses assigning a unique network address to said object identity (*e.g.*, *Payne* teaches using unique network addresses (*i.e.*, URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*‘519 Application*: Abstract; Pg. 11,

lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (See Appendix A, Elements 41-53.)

(16) **Claim 16.** As set forth in Claim 16, Payne discloses a method for providing a commercial service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16) (*'519 Application*: Pg. 11, lines 7-19.) Payne further discloses using first computing resources operated by a first business entity to send first display information to a user device (*e.g.*, Payne teaches that the payment computer sends a display document to the buyer computer (*Payne*: Col. 6, lines 1-14; Figs. 2C, 6), wherein the first display information includes first and second controls (*e.g.*, Payne teaches that the document sent from the payment computer to the buyer computer includes controls both for opening an account, and for retrieving a requested document (*Payne*: Col. 6, lines 1-14; Fig. 6.) Payne further discloses accepting a first signal in response to a user input to activate the first control (*e.g.*, Payne teaches sending a signal to the payment computer when the user clicks on the “open” button to open an account (*Payne*: Col. 6, lines 15-30; Fig. 2C.) Payne further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*e.g.*, Payne teaches opening an account in response to the first signal, under the control of the payment computer, which interacts with the buyer computer (*Payne*: Col. 6, lines 15-30; Figs. 2C, 2D.) Payne further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device

(e.g., Payne teaches sending a second signal when the user clicks on the “continue” button, which leads to a user requesting to purchase an object, with the request being fulfilled by the merchant computer, which has separate resources from the operator of the payment computer (*Payne*: Col. 4, lines 35-45, Col. 6, lines 31-42; Col. 7, lines 31-50; Figs. 2H, 2I.)

Additionally, Payne discloses associating an object identity with information entries and attributes (e.g., Payne teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (e.g., Payne teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) Payne further discloses storing said information entries and said attributes in a virtual information store (e.g., Payne teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (e.g., Payne teaches using unique network addresses (i.e., URLs) to identify objects) (*Payne*: Col. 5, lines 43-47;

Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*'519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (*See Appendix A, Elements 54-66.*)

(17) **Claim 17.** Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Payne further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*e.g.*, Payne teaches exchanging information between the merchant computer and the payment computer, which Payne says may be operated by different entities.) (*Payne*: Col. 1, lines 27-35) (*'519 Application*: Pg. 14, lines 9-18; Pg. 19, lines 7-14.) (*See Appendix A, Element 67.*)

(18) **Claim 18.** Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Payne further discloses an embodiment where there is a three-way transaction between the first computing resources (*e.g.*, a merchant computer), the second computing resources (*e.g.*, a payment computer) and the user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 27-35; Col. 4, lines 35-45; Fig. 1) (*'519 Application*: Pg. 14, lines 9-18; Pg. 16, lines 5-14.) (*See Appendix A, Element 68.*)

(19) **Claim 19.** Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Payne further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*e.g.*, Payne teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity

with its own computing resources) (*Payne*: Col. 4, lines 35-45; Col. 7, lines 24-27) ('519 *Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.) (See Appendix A, Element 69.)

SNQ 2. Ginter

Claims 1-19 of the '506 patent are anticipated by Ginter.

A substantial new question is raised by Ginter as to Claims 1-19 of the '506 patent. Ginter was never disclosed by the Applicant, nor was it cited by the Examiner during the '506 patent's prior examination. Requester submits that a reasonable examiner would consider this teaching, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Ginter anticipates each and every limitation of Claims 1-19. For this reason, Ginter raises a substantial new question of patentability with respect to Claims 1-19.

(20) **Claim 1.** Ginter discloses this claimed method in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79, 87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70).

As set forth in Claim 1, Ginter discloses a method for providing a service over a digital network. (*Ginter*: e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database services, information delivery and

clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, "services-based" VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses sending first display information from a first computer system to a user device (*Ginter*: e.g., sending to a VDE display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes a control associated with a commercial service (*Ginter*: e.g., each VDE control (e.g., Figs. 5A, 5B, 30-31, 72B, 72C; 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63) is associated at least with VDE (a commercial service) and typically with some third-party commercial service as well, such as the creators, distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87)).

Ginter further discloses accepting a first signal in response to a user input to activate the control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by

user actions selecting controls or selecting objects triggering the activation of associated controls, which activation signals other VDE nodes of the selection (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Ginter*: e.g., in each of the seven above-identified use scenarios, user-activation of a control often causes communication with a second computer system, such as a VDE repository, clearinghouse, content creator, content distributor, or financial services provider (e.g., 14:9-14, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 52:4-6, 55:48-56:30, 181:13-182:16, 189:9-56, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-254:34, 264:37-48, 273:57-64, 280:43-281:2, 281:23-36, 285:57-286:13, 287:1-7, 287:63-289:23, 290:10-11, 298:33-309:33, 312:49-314:24, 314:26-44)).

Ginter further discloses using the second computer system for sending second display information to the user device (*Ginter*: e.g., in each of the seven above-identified use scenarios, the second computer system typically communicates display information to the user device (e.g., Figs. 72B-72D; 235:59-236:56, 236:60-237:7, 286:14-52, 287:16-21)), wherein the second display information sometimes includes a list of at least one commercial service (*Ginter*: e.g., (a) VDE Object Repositories send user devices display information which they can use to choose between a selection of objects and other commercial services (e.g., Figs. 72B-72D, 78, 84, 86/86A; 236:49-56, 236:60-237:6, 280:43-281:2, 285:57-286:13, 287:49-288:24, 288:43-67, 289:3-23, 290:10-11)); (b) in Other VDE Multi-Party Transactions, each of the “second computer systems” is as able as the “first computer system” to send the user device a catalog, menu or other list of object, control or other

service choices (e.g., Figs. 3, 43a, 49; 52:4-6, 55:48-56:30, 168:61-172:5, 175:8-12, 175:36-55, 181:13-182:16, 189:9-56, 229:8-13, 236:60-237:7, 254:7-15, 264:37-48, 288:25-61, 296:16-28, 301:44-60, 303:65-304:39, 304:66-305:41, 308:53-309:33); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D; 38:6-19, 224:46-62); (d) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (e) VDE Docking Terminal (Figs. 7, 8, 71, 72B-72D; 39:17-40:4, 226:45-235:7); (f) VDE Smart Objects (e.g., Fig. 74; 273:57-64); and (g) Interactive N-Party Applications (e.g., 14:9-14)), and accepting a second signal in response to a user input to select a commercial service from the list (*Ginter*: e.g., user selections of a commercial service send signals to other VDE devices (e.g., other parts of a distributed VDE repository) over the Internet (see, e.g., 18:45, 24:58, 36:12, 279:9, 310:7) or various other networks (e.g., 12:2-5, 86:2-7, 159:1-5, 280:34-43, 281:16-36, 285:58-286:13, 287:63-288:19)).

Ginter further discloses completing a commercial transaction relating to the selected commercial service (*Ginter*: e.g., Ginter discloses completion of transactions related to the user-selected commercial services identified above (e.g., 152:51, 175:8-12, 175:36-55, 178:26-27, 189:9-56, 243:43, 287:21, 288:23, 300:9, 315:15)).

Additionally, Ginter discloses associating an object identity with information entries and attributes (*Ginter*: e.g., Ginter discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30)), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)).

Ginter further discloses storing said information entries and said attributes in a virtual information store (*Ginter*: e.g., Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)).

Ginter further discloses assigning a unique network address to said object identity (*Ginter*: e.g., Ginter discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which the object's contents are stored, and that this is sufficient to locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (*See* Appendix B, Elements 70-82).

(21) **Claim 2.** Claim 2 depends upon Claim 1. (*See* above.) As set forth in Claim 2, Ginter further discloses that the second computer system includes an object router (*Ginter*: e.g., Ginter discloses that any VDE node can include a processor (e.g., Figs. 8, 9) programmed to store and use "routing information" to locate, access, and transmit objects including executable objects (including services), using, e.g., a remote procedure call (RPC) manager (Figs. 12 (732), 13 (550); 79:39-42, 115:30-116:48), stream routers (88:48-67), and/or mail filters (104:57-64). (*See* generally Figs. 12 (770), 54; 97:12-22, 100:6-13, 100:48-57, 100:65-101:2, 189:9-31, 189:43-53)). (*See* Appendix B, Element 83).

(22) **Claim 3.** Claim 3 depends upon Claim 1. (*See* above.) As set forth in Claim 3, Ginter further discloses that the second computer system includes a virtual information store (*Ginter*: e.g., Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems,

including an object registration table) (Figs. 30, 31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). (See Appendix B, Element 84.)

(23) **Claim 4.** Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, Ginter further discloses that the second computer system includes a value-added network switch (*Ginter*: e.g., Ginter discloses that the VDE architecture provides a value added network that provides security, auditing, billing, payment and other services to value adding providers (280:27) and other VDE users (8:64, 9:17, 10:29, 11:7, 11:25-30, 21:31, 280:34-42), including several types of switches including electronic switch 200a (Fig. 1; 52:63-67) and object switch 734 (Figs. 10, 12; 88:47-89:5, 97:12-22)). (See Appendix B, Element 85).

(24) **Claim 5.** Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, Ginter further discloses that the second computer system includes a legacy database (*Ginter*: e.g., Ginter's VDE is designed to work with pre-existing content including a wide range of legacy databases, including "LEXIS, Westlaw, and other related legal databases" (273:57-64), and "business, medical, legal, scientific, governmental, and consumer databases" (7:42-53) (e.g., 13:58-63, 131:59-132:8, 279:49, 280:25, 280:43-281:2)). (See Appendix B, Element 86).

(25) **Claim 6.** Claim 6 depends upon Claim 1. (See above.) As set forth in Claim 6, Ginter further discloses a control that includes a Web page control (*Ginter*: e.g., Ginter discloses implementing and using VDE with Web Servers, Web Browsers and Web Protocols, including URLs, HTTP and HTML (e.g., 100:31-37, 279:22-28, 280:34-65, 285:67-286:5, 287:16-25)). (See Appendix B, Element 87).

(26) **Claim 7.** Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Ginter further discloses that the first computer system is in a first corporate network and

the second computer system is in a second corporate network (*Ginter*: e.g., *Ginter* discloses that VDE users include users from multiple corporations (e.g., Figs. 85, 86; 13:58-66, 39:54, 253:22-39, 265:41, 274:31-40, 311:13-314:24)). For each of the seven use scenario categories identified above, *Ginter* discloses that the first computer system and second computer system may be operated by any of the wide range of VDE users, including separate corporations. (E.g., 4:17-44, 228:42-47). *Ginter* contains more than 130 references to a network, and shows VDE Object Repositories and VDE nodes connected to networks (e.g., networks 3304 and 3312 (Fig. 78), and network 672 (Fig. 70)). (E.g., 3:27-34, 11:29-33, 17:43-50, 73:53, 74:14-20, 159:1-15, 178:2-4, 222:40-47, 223:4-25)). (See Appendix B, Element 88).

(27) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, *Ginter* further discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Ginter*: e.g., *Ginter* broadly discloses that any business entities can communicate over networks under VDE control. Thus, the first corporate network can be operated by any VDE content creator, VDE content distributor, or VDE content end user, including any VDE financial services provider, as can the second corporate network. (E.g., Figs. 2, 2A, 8, 71, 74, 77-87; 14:9-16, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-317:20)). (See Appendix B, Element 89).

(28) **Claim 9.** Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, *Ginter* further discloses that the second computer system includes a legacy computing system (*Ginter*: e.g., *Ginter* discloses that a VDE node, in particular a clearinghouse, need not have special security hardware, but rather can be any computing system running VDE

protection software (e.g., 13:3-13, 78:6-10, 103:8-16); e.g., any of a wide range of legacy databases (7:42-53, 13:58-63, 131:59-132:8, 273:57-64, 279:49, 280:25, 280:43-281:2)).
(See Appendix B, Element 90).

(29) **Claim 10.** Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Ginter further discloses that the user device includes a Web browser (*Ginter:* e.g., Ginter discloses implementing and using VDE with Web Servers, Web Browsers and Web Protocols, including URLs, HTTP and HTML (e.g., 100:31-37, 279:22-28, 280:34-65, 285:67-286:5, 287:16-25)). (See Appendix B, Element 91).

(30) **Claim 11.** Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Ginter further discloses that the display information includes Web page content (*Ginter:* e.g., Ginter discloses implementing and using VDE with Web Servers, Web Browsers and Web Protocols, including URLs, HTTP and HTML (e.g., 100:31-37, 279:22-28, 280:34-65, 285:67-286:5, 287:16-25)). (See Appendix B, Element 92).

(31) **Claim 12.** Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Ginter further discloses that the list of at least one commercial service includes a payment service (*Ginter:* e.g., Ginter discloses a wide range of payment services, and giving users the ability to select between different payment services. (E.g., 9:24-40, 14:51-65, 30:9-27, 32:28-30, 35:24-41, 233:44-234:31)). (See Appendix B, Element 93).

(32) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Ginter further discloses that the user is provided with access to a payment electronic back office system (*Ginter:* e.g., Ginter discloses the user directly or indirectly accessing (broadly construed) the user's account at a VDE repository and/or bank and/or credit card company, which account typically would be maintained in a company's back

office location. (E.g., 29:20-28, 52:11-13, 171:56-172:54, 177:54-178:4, 233:45-63, 287:49-62, 288:25-289:11)). (See Appendix B, Element 94).

(33) **Claim 14**. Ginter discloses this claimed apparatus in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79, 87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70). As set forth in Claim 14, Ginter discloses an apparatus for providing a service over a digital network. (*Ginter*: e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database services, information delivery and clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, "services-based" VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses a processor (*Ginter*: e.g., Ginter discloses that its VDE electronic appliances have at least one processor (e.g., Figs. 8 (CPU 654), 9 (microprocessor 520), 70 (SPUs and CPU), 71 (SPU and CPU)).

Ginter further discloses a machine-readable storage device including one or more instructions executable by the processor (*Ginter*: e.g., Ginter discloses processors which operate by executing instructions stored on some machine-readable storage device, and discloses many examples of a machine readable medium having data representing sequences of instructions (e.g., a Protected Processing Environment executing "load modules.") (e.g., Figs. 8-12; 21:8-20, 60:50-66, 63:57-64:2, 67:23-38)) for sending first display information from a first computer system to a user device (*Ginter*: e.g., sending to a VDE display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes a control associated with a commercial service (*Ginter*: e.g., each VDE control (e.g., Figs. 5A, 5B, 30-31, 72B, 72C; 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63) is associated at least with VDE (a commercial service) and often with some third-party commercial service as well, such as the providers, distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87)).

Ginter further discloses accepting a first signal in response to a user input to activate the control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by

user actions selecting controls or selecting objects triggering the activation of associated controls (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Ginter*: e.g., in each of the seven above-identified use scenarios, user-activation of a control sometimes causes communication with a second computer system, such as a VDE repository, clearinghouse, content creator or content distributor, or financial services provider (e.g., 14:9-14, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 52:4-6, 55:48-56:30, 181:13-182:16, 189:9-56, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-254:34, 264:37-48, 273:57-64, 280:43-281:2, 281:23-36, 285:57-286:13, 287:1-7, 287:63-289:23, 290:10-11, 298:33-309:33, 312:49-314:24, 314:26-44)).

Ginter further discloses using the second computer system for sending second display information to the user device (*Ginter*: e.g., in each of the seven above-identified use scenarios, the second computer system typically communicates display information to the user device (e.g., Figs. 72B-72D; 235:59-236:56, 236:60-237:7, 286:14-52, 287:16-21)), wherein the second display information includes a list of at least one commercial service (*Ginter*: e.g., (a) VDE Object Repositories send user devices display information from which they can choose between a selection of objects and other commercial services (e.g., Figs. 72B-72D, 78, 84, 86/86A; 236:49-56, 236:60-237:6, 280:43-281:2, 285:57-286:13, 287:49-288:24, 288:43-67, 289:3-23, 290:10-11); (b) in Other VDE Multi-Party Transactions, each of the “second computer systems” is as able as the “first computer system” to send the user device a catalog, menu or other list of object, control or other service choices (e.g., Figs. 3, 43a, 49; 52:4-6, 55:48-56:30, 168:61-172:5, 175:8-12, 175:36-

55, 181:13-182:16, 189:9-56, 229:8-13, 236:60-237:7, 254:7-15, 264:37-48, 288:25-61, 296:16-28, 301:44-60, 303:65-304:39, 304:66-305:41, 308:53-309:33); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D; 38:6-19, 224:46-62); (d) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (e) VDE Docking Terminal (Figs. 7, 8, 71, 72B-72D; 39:17-40:4, 226:45-235:7); (f) VDE Smart Objects (e.g., Fig. 74; 273:57-64); and (g) Interactive N-Party Applications (e.g., 14:9-14)), and accepting a second signal in response to a user input to select a commercial service from the list (*Ginter*: e.g., user selections of a commercial service send signals to other VDE devices (e.g., other parts of a distributed VDE repository) over the Internet (see, e.g., 18:45, 24:58, 36:12, 279:9, 310:7) or various other networks (e.g., 12:2-5, 86:2-7, 159:1-5, 280:34-43, 281:16-36, 285:58-286:13, 287:63-288:19)). *Ginter* further discloses completing a commercial transaction relating to the selected commercial service (*Ginter*: e.g., *Ginter* discloses completion of transactions related to the user-selected commercial services identified above (e.g., 152:51, 175:8-12, 175:36-55, 178:26-27, 189:9-56, 243:43, 287:21, 288:23, 300:9, 315:15)).

Additionally, *Ginter* discloses associating an object identity with information entries and attributes (*Ginter*: e.g., *Ginter* discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)). *Ginter* further discloses storing said information entries and said attributes in a virtual information store (*Ginter*: e.g., *Ginter* discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE

repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). Ginter further discloses assigning a unique network address to said object identity (*Ginter*: e.g., Ginter discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which the object's contents are stored, and that this is sufficient to locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (See Appendix B, Elements 95-109).

(34) **Claim 15**. Ginter discloses this claimed method in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79, 87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70).

As set forth in Claim 15, Ginter discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Ginter*: e.g., Ginter discloses processors which operate by executing instructions stored on some machine-readable storage device, and discloses many examples of a machine readable medium having data representing sequences of instructions (e.g., a Protected Processing Environment executing "load modules.") (e.g., Figs. 8-12; 21:8-20, 60:50-66, 63:57-64:2, 67:23-38), for providing commercial services, e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database

services, information delivery and clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, “services-based” VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Ginter*: e.g., sending to a VDE display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes a control associated with a commercial service (*Ginter*: e.g., each VDE control (e.g., Figs. 5A, 5B, 30-31, 72B, 72C; 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63) is associated at least with VDE (a commercial service) and often with some third-party commercial service as well, such as the providers, distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87)).

Ginter further discloses accepting a first signal in response to a user input to activate the control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by user actions selecting controls or selecting objects triggering the activation of associated controls (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Ginter*: e.g., in each of the seven above-identified use scenarios, user-activation of a control sometimes causes communication with a second computer system, such as a VDE repository, clearinghouse, content creator or content distributor, or financial services provider (e.g., 14:9-14, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 52:4-6, 55:48-56:30, 181:13-182:16, 189:9-56, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-254:34, 264:37-48, 273:57-64, 280:43-281:2, 281:23-36, 285:57-286:13, 287:1-7, 287:63-289:23, 290:10-11, 298:33-309:33, 312:49-314:24, 314:26-44)).

Ginter further discloses using the second computer system for sending second display information to the user device (*Ginter*: e.g., in each of the seven above-identified use scenarios, the second computer system typically communicates display information to the user device (e.g., Figs. 72B-72D, 235:59-236:56, 236:60-237:7, 286:14-52, 287:16-21)), wherein the second display information includes a list of at least one commercial service (*Ginter*: e.g., (a) VDE Object Repositories send user devices display information from which they can choose between a selection of objects and other commercial services (e.g., Figs. 72B-72D, 78, 84, 86/86A; 236:49-56, 236:60-237:6, 280:43-281:2, 285:57-286:13, 287:49-288:24, 288:43-67, 289:3-23, 290:10-11); (b) in Other VDE Multi-Party Transactions, each of the “second computer systems” is as able as the “first computer

system” to send the user device a catalog, menu or other list of object, control or other service choices (e.g., Figs. 3, 43a, 49; 52:4-6, 55:48-56:30, 168:61-172:5, 175:8-12, 175:36-55, 181:13-182:16, 189:9-56, 229:8-13, 236:60-237:7, 254:7-15, 264:37-48, 288:25-61, 296:16-28, 301:44-60, 303:65-304:39, 304:66-305:41, 308:53-309:33); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D; 38:6-19, 224:46-62); (d) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (e) VDE Docking Terminal (Figs. 7, 8, 71, 72B-72D; 39:17-40:4, 226:45-235:7); (f) VDE Smart Objects (e.g., Fig. 74; 273:57-64); and (g) Interactive N-Party Applications (e.g., 14:9-14)), and accepting a second signal in response to a user input to select a commercial service from the list (*Ginter*: e.g., user selections of a commercial service send signals to other VDE devices (e.g., other parts of a distributed VDE repository) over the Internet (see, e.g., 18:45, 24:58, 36:12, 279:9, 310:7) or various other networks (e.g., 12:2-5, 86:2-7, 159:1-5, 280:34-43, 281:16-36, 285:58-286:13, 287:63-288:19)). *Ginter* further discloses completing a commercial transaction relating to the selected commercial service (*Ginter*: e.g., *Ginter* discloses completion of transactions related to the user-selected commercial services identified above (e.g., 152:51, 175:8-12, 175:36-55, 178:26-27, 189:9-56, 243:43, 287:21, 288:23, 300:9, 315:15)).

Additionally, *Ginter* discloses associating an object identity with information entries and attributes (*Ginter*: e.g., *Ginter* discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30)), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)). *Ginter* further discloses storing said information entries

and said attributes in a virtual information store (*Ginter*: Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). Ginter further discloses assigning a unique network address to said object identity (*Ginter*: Ginter discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which the object's contents are stored, and that this is sufficient to locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (See Appendix B, Elements 110-122).

(35) **Claim 16**. Ginter discloses this claimed method in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79, 87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70).

As set forth in Claim 16, Ginter discloses a method for providing a commercial service over a digital network. (*Ginter*: e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database services, information delivery and clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, "services-based" VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including

network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses using first computing resources operated by a first business entity to send first display information to a user device (*Ginter*: e.g., sending to a VDE display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes first and second controls (*Ginter*: e.g., Ginter's first and second controls can be any VDE object, instructions, user interface element or other information described in Ginter communicated to VDE users, from which users can choose. Ginter discloses plural controls being associated with each object or set of content that a user may be desire to access. (E.g., Figs. 5A, 5B, 30-31; 6:41-54, 27:9-17, 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63). (See also Figs. 43a, 72B-72D, 78, 86/86A; 17:27, 18:43, 19:16-57, 26:27-45, 38:60-39:2, 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63, 160:18-31, 175:8-12, 175:36-55, 231:10, 236:4-56, 236:60-237:7, 247:10-42, 254:66-255:30, 281:39-44, 281:59-282:2, 282:32, 283:3, 283:30, 285:57-286:52, 287:16-288:24, 288:43-67, 296:16-28)).

Ginter further discloses accepting a first signal in response to a user input to activate the first control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by user actions selecting controls or selecting objects triggering the activation of associated controls, which activation signals other VDE nodes of the selection (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*Ginter*: e.g., every control mentioned in Ginter is associated with a commercial service (e.g., VDE itself) and every commercial service is controlled by various controls. Many VDE controls are also associated with some third-party commercial service as well, such as the providers or distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87; 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (*Ginter*: e.g., every control mentioned in Ginter is associated with a commercial service (e.g., VDE itself) and every commercial

service is controlled by various controls. Many VDE controls are also associated with some third-party commercial service as well, such as the providers or distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87; 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Additionally, Ginter discloses associating an object identity with information entries and attributes (*Ginter*: e.g., Ginter discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30)), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)). Ginter further discloses storing said information entries and said attributes in a virtual information store (*Ginter*: Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). Ginter further discloses assigning a unique network address to said object identity (*Ginter*: e.g., Ginter discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which the object's contents are stored, and that this is sufficient to locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (See Appendix B, Elements 123-135).

(36) **Claim 17.** Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Ginter further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*Ginter:* e.g., Ginter discloses that users can perform VDE-managed transactions involving user communications with two business entities, and communications between those two entities, in order to complete a transaction, such as three-way communications among a user, a repository, and a financial services provider (e.g., Figs. 2, 2A, 8, 70, 71, 74, 77-87; 14:9-16, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 52:4-6, 61:30-36, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-317:20)). (See Appendix B, Element 136).

(37) **Claim 18.** Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Ginter further discloses an embodiment where there is a three-way transaction between the first computing resources, the second computing resources and the user device (*Ginter:* e.g., Ginter discloses using VDE to engage in a wide range of three-way and n-way transactions, including negotiating VDE agreements among three or more parties and when registering, accessing, opening, or reading a protected objects (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 50, 54, 72B-72D, 77, 79, 87); 2:56-61, 8:17-21, 9:37-40, 14:9-14, 16:13-20, 19:9-15, 45:23-57, 86:28-34, 157:28-36, 248:38-40, 249:46-49, 279:18-21, 292:65-293:18)). (See Appendix B, Element 137).

(38) **Claim 19.** Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Ginter further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Ginter:* e.g., Ginter discloses that VDE users include users from multiple corporations (e.g., Figs. 85-86; 13:58-66, 39:54, 253:22-39, 265:41, 274:31-40, 311:13-

314:24)). For each of the seven use scenario categories identified above, Ginter discloses that the first computer system and second computer system may be operated by any of the wide range of VDE users, including separate corporations. (E.g., 4:17-44, 228:42-47). Ginter contains more than 130 references to a network, and shows VDE Object Repositories and VDE nodes connected to networks (e.g., networks 3304 and 3312 (Fig. 78), and network 672 (Fig. 70)). (E.g., 3:27-34, 11:29-33, 17:43-50, 73:53, 74:14-20, 159:1-15, 178:2-4, 222:40-47, 223:4-25)). (See Appendix B, Element 138).

SNQ 3. Popp

Claims 1-11, 14-16 and 19 of the '506 patent are anticipated by Popp.

A substantial new question is raised by Popp as to Claims 1-11, 14-16 and 19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was never considered in view of the Patent Owner's new statements regarding the scope of the claims. In particular, the Patent Owner's statements during the WebX litigation concerning what constitutes an object, an object identity, information entries and attributes, a virtual information store and a unique network address make clear that these elements were not novel, and that they existed in the prior art, including Popp. Popp may thus properly be considered as "old art" that is being presented in a new light. See MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp, including its inherent disclosure of these various elements that the Applicant added specifically to gain allowance over Popp, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp

anticipates each and every limitation of Claims 1-11, 14-16 and 19. For this reason, Popp raises a substantial new question of patentability with respect to Claims 1-11, 14-16 and 19.

(39) **Claim 1.** As set forth in Claim 1, Popp discloses a method for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp

further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (See Appendix C, Elements 139-151.)

(40) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, *Popp* further discloses that the second computer system includes an object router (*Popp*: Col. 3, lines 59-65; Col. 6, lines 49-52; Col. 6, line 63 – Col. 7, line 5; Col. 8, lines 49-59.) (See Appendix C, Element 152.)

(41) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, *Popp* further discloses that the second computer system includes a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-55.) (See Appendix C, Element 153.)

(42) **Claim 4.** Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, *Popp* further discloses that the second computer system includes a value-added network switch (*Popp*: Col. 3, lines 59-65; Col. 8, lines 3-8, 17-31.) (See Appendix C, Element 154.)

(43) **Claim 5.** Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, *Popp* further discloses that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) (See Appendix C, Element 155.)

(44) **Claim 6.** Claim 6 depends upon Claim 1. (See above.) As set forth in Claim 6, *Popp* further discloses a control that includes a Web page control (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 14-18; Col. 9, lines 10-12, 29-31; Col. 10, lines 19-28; Fig. 3B.) (See Appendix C, Element 156.)

(45) **Claim 7.** Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Popp further discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 157.)

(46) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 158.)

(47) **Claim 9.** Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) (See Appendix C, Element 159.)

(48) **Claim 10.** Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Popp further discloses that the user device includes a Web browser (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 5-18; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 160.)

(49) **Claim 11.** Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Popp further discloses that the display information includes Web page content (*Popp*: Col. 1, lines 26-34; Col. 4, lines 5-18; Col. 8, lines 44-48; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 161.)

(50) **Claim 14.** As set forth in Claim 14, Popp discloses an apparatus for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5,

lines 11-12, 56-57; Col. 6, lines 9-31; Fig. 1.) Popp further discloses a processor (*Popp*: Col. 6, lines 9-14.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31) for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26–31, 53–55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external

database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (See Appendix C, Elements 164-178.)

(51) **Claim 15.** As set forth in Claim 15, *Popp* discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31.) *Popp* further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) *Popp* further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) *Popp* also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) *Popp* further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26–31, 53–55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (*See* Appendix C, Elements 179-191.)

(52) **Claim 16.** As set forth in Claim 16, Popp discloses a method for providing a commercial service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses using first computing resources operated by a first business entity to send first display information to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes first and second controls (*Popp*: Col. 9, lines 27-28, 31-47, 56-65; Col. 10, lines 19-28; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the first control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*Popp*: Col. 9, lines 31-47.) Popp further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second

computing resources and interacting with the user device (*Popp*: Col. 10, lines 19-28; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26–31, 53–55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (See Appendix C, Elements 192-204.)

(53) **Claim 19.** Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 207.)

C. Rejections Under 35 U.S.C. § 103²¹

The following is a quotation of 35 U.S.C. § 103(a), which forms the basis of all obviousness rejections:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

²¹ None of the proposed rejections set forth below was considered during prosecution of the '506 patent. For a discussion of how each individual reference was treated during the original examination of the '506 patent, see individual SNQs.

ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. The “Obviousness” Analysis Under KSR

On April 30, 2007, the Supreme Court of the United States issued an opinion in the case of *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007). The Court rejected a rigid application of the “teaching/suggestion/motivation” (or “TSM”) test and reaffirmed the use of a more expansive and flexible approach to the obviousness question. The Supreme Court stated:

We begin by rejecting the rigid approach of the Court of Appeals. Throughout this Court’s engagement with the question of obviousness, our cases have set forth an expansive and flexible approach inconsistent with the way the Court of Appeals applied its TSM test here. To be sure, *Graham* recognized the need for “uniformity and definiteness.” 383 U. S., at 18. Yet the principles laid down in *Graham* reaffirmed the “functional approach” of *Hotchkiss*, 11 How. 248. See 383 U. S., at 12. To this end, *Graham* set forth a broad inquiry and invited courts, where appropriate, to look at any secondary considerations that would prove instructive. *Id.*, at 17.

(*Id.*, 1727 S. Ct. at 1739.)

The Supreme Court’s pronouncements and guidelines for the obviousness analysis are particularly instructive for the present Reexamination Request since as shown herein the claims (as apparently construed by the patentee) are anticipated by the prior art or a mere substitution or combination of prior art elements providing the same predictable use and function for which they are known by one of ordinary skill in the art. For instance, the Supreme Court stated:

Neither the enactment of §103 nor the analysis in *Graham* disturbed this Court’s earlier instructions concerning the need for caution in granting a patent based on the combination of elements found in the prior art. For over a half century, the Court has held that a “patent for a combination which only

unites old elements with no change in their respective functions . . . obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men.” *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U. S. 147, 152 (1950). This is a principal reason for declining to allow patents for what is obvious. The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. Three cases decided after *Graham* illustrate the application of this doctrine.

In *United States v. Adams*, 383 U. S. 39, 40 (1966), a companion case to *Graham*, the Court considered the obviousness of a “wet battery” that varied from prior designs in two ways: It contained water, rather than the acids conventionally employed in storage batteries; and its electrodes were magnesium and cuprous chloride, rather than zinc and silver chloride. The Court recognized that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result. 383 U. S., at 50-51. It nevertheless rejected the Government’s claim that Adams’s battery was obvious. The Court relied upon the corollary principle that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. *Id.*, at 51-52. When Adams designed his battery, the prior art warned that risks were involved in using the types of electrodes he employed. The fact that the elements worked together in an unexpected and fruitful manner supported the conclusion that Adams’s design was not obvious to those skilled in the art.

In *Anderson’s-Black Rock, Inc. v. Pavement Salvage Co.*, the Court elaborated on this approach. The subject matter of the patent before the Court was a device combining two pre-existing elements: a radiant-heat burner and a paving machine. The device, the Court concluded, did not create some new synergy: The radiant-heat burner functioned just as a burner was expected to function; and the paving machine did the same. The two in combination did no more than they would in separate, sequential operation. *Id.*, at 60-62. In those circumstances, “while the combination of old elements performed a useful function, it added nothing to the nature and quality of the radiant-heat burner already patented,” and the patent failed under §103. *Id.*, at 62 (footnote omitted).

Finally, in *Sakraida v. AG Pro, Inc.*, 425 U. S. 273 (1976), the Court derived from the precedents the conclusion that **when a patent "simply arranges old elements with each performing the same function it had been known to perform" and yields no more than one would expect from such an arrangement, the combination is obvious. *Id.*, at 282.**

The principles underlying these cases are instructive when the question is whether a patent claiming the combination of elements of prior art is obvious. When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida* and *Anderson's-Black Rock* are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

(*Id.*, 1727 S. Ct. at 1739-40, emphasis added.)

2. PTO Examination Guidelines For Determining Obviousness

In view of KSR, the PTO amended its guidelines used to determine obviousness of claimed subject matter, providing several rationales on which a claim of obviousness may be based:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." KSR, 550 U.S. at ___, 82 USPQ2d at 1396. Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;

- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. See MPEP § 2143 for a discussion of the rationales listed above along with examples illustrating how the cited rationales may be used to support a finding of obviousness. See also MPEP § 2144 - § 2144.09 for additional guidance regarding support for obviousness determinations."

MPEP § 2141(III).

SNQ 4. Payne

Claims 1-19 of the '506 patent are obvious over Payne.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by Payne, alternatively, Claims 1-19 are also obvious over Payne, given the knowledge of one of ordinary skill in the art at the time that the application for the '506 application was filed.

A substantial new question is raised by Payne as to Claims 1-19 of the '506 patent. Although it is prior art of record in the '506 patent, Payne's teachings as discussed below were not relied upon during the '506 patent's prior examination. Payne was never relied upon in the rejection of any claims, nor was it even discussed during the original

examination, thus it may properly be considered as “old art” that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Payne contains or suggests each and every limitation of Claims 1-19. For this reason, Payne raises a substantial new question of patentability with respect to Claims 1-19.

(54) **Claim 1.** As set forth in Claim 1, Payne discloses a method for providing a service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16; Col. 10, lines 9-20) (*'519 Application*: Pg. 11, lines 7-19.) Payne further discloses sending first display information from a first computer system (*e.g.*, a merchant computer) to a user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) (*'519 Application*: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (*e.g.*, a hypertext link allowing the user to purchase a product) (*Payne*: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) Payne further discloses accepting a first signal in response to a user input to activate the control (*e.g.*, upon selecting a product, Payne teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.) Payne also discloses initiating, in response to the first signal (*e.g.*, in response to the buyer selecting a product for purchase), communication between the user device (*e.g.*, the buyer computer) and a second computer system (*e.g.*, the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.)

Payne further discloses using the second computer system (*e.g.*, payment computer) for sending second display information to the user device (*e.g.*, the buyer computer) (*Payne*: Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application*: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (*e.g.*, *Payne* teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.) *Payne* further discloses completing a commercial transaction relating to the selected commercial service (*e.g.*, *Payne* teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, *Payne* discloses associating an object identity with information entries and attributes (*e.g.*, *Payne* teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled "CustItemEntryPage.cgi," Exh. Pg. 164) (*'519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3,

Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*'519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) Payne further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, Payne teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*'519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (*e.g.*, Payne teaches using unique network addresses (*i.e.*, URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*'519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (*See Appendix A, Elements 1-13.*)

(55) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, Payne further discloses that the second computer system (*e.g.*, the payment computer) includes an object router (*e.g.*, the payment computer is capable of locating and accessing objects on the network) (*Payne*: Figs. 2F, 2G; Appendix E, page beginning with “Encoding payment orders in URLs,” Exh. Pg. 128) (*'519 Application*: Pg. 3, lines 11-14; Pg. 19, lines 15-23; Fig. 13; Pg. 23, lines 1-7; Fig. 14; Pg. 24, lines 16-24.) (*See Appendix A, Element 14.*)

(56) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, Payne further discloses that the second computer system (*e.g.*, the payment computer)

includes a virtual information store (*Payne*: Col. 3, lines 47-51; Col. 5, lines 11-15; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136) ('519 *Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) (See Appendix A, Element 15.)

(57) **Claim 4.** Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, Payne further discloses that the second computer system (*e.g.*, the payment computer) includes a value-added network switch (*e.g.*, when a user selects a Web page control, such as clicking on a hyperlink to complete a payment transaction, a request is sent to switch from the Web application, or the Web page containing the link, to a transactional application, such as an application which checks the status of a user account, which application then processes and acts in response to a user request) ('519 *Application*: Pg. 3, lines 11-14; Pg. 19, lines 15-23; Figs. 13-14; Pg. 23, lines 1-7; Pg. 24, lines 16-24; Pg. 13, line 24 – Pg. 14, line 8.) Additionally, such a switch is inherent in Payne's disclosure of clicking on Web page links to invoke applications. (See Appendix A, Element 16.)

(58) **Claim 5.** Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, Payne further discloses that the second computer system includes a legacy database (*e.g.*, Payne teaches using an "existing financial system network" with information about existing accounts, which inherently would involve the use of existing, or "legacy" databases containing such information) ('519 *Application*: Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Col. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

In view of Payne's disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Payne's invention would have been used to access any conventional databases, *e.g.*, a "legacy" database. See, *e.g.*, Exhibit 2,

April 2, 2007 Office Action, Exh. Pg. 250 (“[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”) (*See* Appendix A, Element 17.)

(59) **Claim 6.** Claim 6 depends upon Claim 1. (*See* above.) As set forth in Claim 6, (Payne further discloses a control that includes a Web page control (*e.g.*, using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages, such as Mosaic pages) (*Payne*: Col. 10, lines 9-20; Col. 5, lines 26-27; Col. 6, lines 5-15; Figs. 5-14; Appendix A, Exh. Pg. 38; Appendix E, page entitled “Shopping Cart Mechanism; how to write payment and shopping cart URLs,” Exh. Pg. 130) (‘519 *Application*: Pg. 11, lines 7-19; Pg. 12, lines 1-6, 15-18; Figs. 2-5, 8-11.) (*See* Appendix A, Element 18.)

(60) **Claim 7.** Claim 7 depends upon Claim 1. (*See* above.) As set forth in Claim 7, Payne further discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*e.g.*, the merchant computer and payment computer are owned and/or operated by different corporate entities, and therefore in different corporate “networks,” though they operate on a common network, namely, the Internet). (*Payne*: Col. 4, lines 35-45) (‘519 *Application*: Pg. 1, lines 19-22; Pg. 2, line 23 – Pg. 3, line 2; Pg. 3, lines 11-14; Pg. 4, lines 8-23.) (*See* Appendix A, Element 19.)

(61) **Claim 8.** Claim 8 depends upon Claim 7. (*See* above.) As set forth in Claim 8, Payne further discloses that the first corporate network (*e.g.*, the merchant computer) is operated by a first business entity and wherein the second corporate network (the payment computer) is operated by a second business entity (*e.g.*, Payne teaches having a merchant

avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant, indicating that the merchant and entity making payment to the merchant are separate entities; Payne further teaches that the merchant computer and the payment computer may be operated by separate entities, thus implicitly or inherently disclosing separate “corporate networks”) (*Payne*: Col. 4, lines 35-45) (*‘519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.) (*See* Appendix A, Element 20.)

(62) **Claim 9.** Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, Payne further discloses that the second computer system includes a legacy computing system (*e.g.*, Payne teaches using an “existing financial system network” with information about existing accounts, which inherently would involve the use of existing, or “legacy” computer systems containing such information) (*‘519 Application*: Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Pg. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

In view of Payne’s disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Payne’s invention would have been used to access any conventional computer systems, *e.g.*, a “legacy” computer system. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”) (*See* Appendix A, Element 21.)

(63) **Claim 10.** Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Payne further discloses that the user device includes a Web browser (*Payne*: Col.

1, lines 15-17; Col. 4, lines 43-45; Col. 5, lines 27-30; Col. 10, lines 9-20; Figs. 5-14) ('519 Application: Pg. 11, lines 7-19; Figs. 2-5 and 8-11.) (See Appendix A, Element 22.)

(64) **Claim 11.** Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Payne further discloses that the display information includes Web page content (e.g., Payne teaches using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages, or Web page content) (Payne: Col. 10, lines 9-20; Appendix A, Exh. Pg. 38; Appendix E, page entitled "Shopping Cart Mechanism; how to write payment and shopping cart URLs," Exh. Pg. 130; Figs. 5-14) ('519 Application: Pg. 11, lines 7-19; Pg. 12, lines 1-6; Pg. 12, lines 15-18; Figs. 2-5 and 8-11.) (See Appendix A, Element 23.)

(65) **Claim 12.** Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Payne further discloses that the list of at least one commercial service includes a payment service (e.g., Payne provides an option of opening an account to make payments, as well as making a payment using such an account) (Payne: Col. 6, lines 1-14, 15-30, 31-42; Col. 6, line 43 – Col. 7, line 50.) (See Appendix A, Element 24.)

(66) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Payne further discloses that the user is provided with access to a payment electronic back office system (e.g., Payne teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) ('519 Application: Pg. 2, lines 18-20; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

In view of Payne's disclosure of using his system with existing financial networks, including banks, to authorize payments and other debits from a user's account, it would have been obvious to one skilled in the art that Payne's invention would have been used to access a bank back office system. This is made even clearer when looking at how Applicant

described accessing a bank back office system. Applicant describes a user being provided access to a payment electronic back office system as follows: "Once Bank POSvc application 510 has been activated, user 100 will be able to connect to Bank services and utilize the application to perform banking transactions, thus accessing data from a host or data repository 575 in the Bank "Back Office." ('506 patent, Col. 7, lines 32-36.) This description is similar, if not identical, to the services provided in Payne. (See Appendix A, Element 24.)

(67) **Claim 14.** As set forth in Claim 14, Payne discloses an apparatus for providing a service over a digital network. (*Payne*: Title; Abstract; Col.1, lines 14-16)(*'519 Application*: Pg. 11, lines 7-19.) Payne further discloses a processor (*e.g.*, Payne teaches multiple computers which are capable of processing instructions, and therefore explicitly or inherently discloses processors) (*Payne*: Col. 2, lines 43-65; Col. 3, lines 38-42; Col. 8, lines 25-31.) Payne further discloses a machine-readable storage device including one or more instructions executable by the processor (*e.g.*, Payne discloses computers which have access to databases for storage of information, and further discloses those computers executing or processing instructions) (*Payne*: Col. 2, lines 43-65; Col. 3, lines 38-42; Col. 4, lines 52-65; Fig. 1) (*'519 Application*: Pg. 10, line 23 – Pg. 11, line 2) for sending first display information from a first computer system (*e.g.*, a merchant computer) to a user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) (*'519 Application*: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (*e.g.*, a hypertext link allowing the user to purchase a product) (*Payne*: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) Payne further discloses accepting a first signal in response to a user input to

activate the control (*e.g.*, upon selecting a product, Payne teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.) Payne also discloses initiating, in response to the first signal (*e.g.*, in response to the buyer selecting a product for purchase), communication between the user device (*e.g.*, the buyer computer) and a second computer system (*e.g.*, the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) Payne further discloses using the second computer system (*e.g.*, payment computer) for sending second display information to the user device (*e.g.*, the buyer computer) (*Payne*: Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application*: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (*e.g.*, Payne teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.) Payne further discloses completing a commercial transaction relating to the selected commercial service (*e.g.*, Payne teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, Payne discloses associating an object identity with information entries and attributes (*e.g.*, Payne teaches a system for uniquely naming objects, and having these

objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled "CustItemEntryPage.cgi," Exh. Pg. 164) ('519 Application: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) ('519 Application: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) *Payne* further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, *Payne* teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled "CustItemEntryPage.cgi," Exh. Pg. 164.) ('519 Application: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) *Payne* further discloses assigning a unique network address to said object identity (*e.g.*, *Payne* teaches using unique network addresses (*i.e.*, URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) ('519 Application: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (See Appendix A, Elements 26-40.)

(68) **Claim 15.** As set forth in Claim 15, *Payne* discloses a machine-readable storage device including instructions executable by a processor for providing a commercial

service over a digital network (*e.g.*, Payne teaches computers which have access to databases for storage of information, and further discloses computers which are capable of processing instructions, and therefore explicitly or inherently discloses processors for providing a commercial service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16, 24-27; Col. 2, lines 43-65; Col. 3, lines 29-34, 38-42; Col. 4, lines 52-65; Col. 5, lines 16-25; Col. 8, lines 25-31; Fig. 1) (*'519 Application*: Pg. 11, lines 7-19, 20-22; Pg. 10, line 23 – Pg. 11, line 2.) Payne further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system (*e.g.*, a merchant computer) to a user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) (*'519 Application*: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (*e.g.*, a hypertext link allowing the user to purchase a product) (*Payne*: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) Payne further discloses accepting a first signal in response to a user input to activate the control (*e.g.*, upon selecting a product, Payne teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.) Payne also discloses initiating, in response to the first signal (*e.g.*, in response to the buyer selecting a product for purchase), communication between the user device (*e.g.*, the buyer computer) and a second computer system (*e.g.*, the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) Payne further discloses using the second computer system (*e.g.*, payment computer) for sending second display information to the user device (*e.g.*, the buyer computer) (*Payne*:

Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application*: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (*e.g.*, *Payne* teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.) *Payne* further discloses completing a commercial transaction relating to the selected commercial service (*e.g.*, *Payne* teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, *Payne* discloses associating an object identity with information entries and attributes (*e.g.*, *Payne* teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled "CustItemEntryPage.cgi," Exh. Pg. 164) (*'519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*'519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) *Payne* further discloses storing

said information entries and said attributes in a virtual information store (e.g., Payne teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (‘519 Application: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (e.g., Payne teaches using unique network addresses (i.e., URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (‘519 Application: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (See Appendix A, Elements 41-53.)

(69) **Claim 16.** As set forth in Claim 16, Payne discloses a method for providing a commercial service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16) (‘519 Application: Pg. 11, lines 7-19.) Payne further discloses using first computing resources operated by a first business entity to send first display information to a user device (e.g., Payne teaches that the payment computer sends a display document to the buyer computer (*Payne*: Col. 6, lines 1-14; Figs. 2C, 6), wherein the first display information includes first and second controls (e.g., Payne teaches that the document sent from the payment computer to the buyer computer includes controls both for opening an account, and for retrieving a requested document (*Payne*: Col. 6, lines 1-14; Fig. 6.) Payne further discloses accepting a first signal in response to a user input to activate the first control (e.g., Payne teaches sending a signal to the payment computer when the user clicks on the “open”

button to open an account (*Payne*: Col. 6, lines 15-30; Fig. 2C.) *Payne* further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*e.g.*, *Payne* teaches opening an account in response to the first signal, under the control of the payment computer, which interacts with the buyer computer (*Payne*: Col. 6, lines 15-30; Figs. 2C, 2D.) *Payne* further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (*e.g.*, *Payne* teaches sending a second signal when the user clicks on the “continue” button, which leads to a user requesting to purchase an object, with the request being fulfilled by the merchant computer, which has separate resources from the operator of the payment computer (*Payne*: Col. 4, lines 35-45, Col. 6, lines 31-42; Col. 7, lines 31-50; Figs. 2H, 2I.)

Additionally, *Payne* discloses associating an object identity with information entries and attributes (*e.g.*, *Payne* teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3,

Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*'519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) Payne further discloses storing said information entries and said attributes in a virtual information store (e.g., Payne teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*'519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (e.g., Payne teaches using unique network addresses (i.e., URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*'519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.) (See Appendix A, Elements 54-66.)

(70) **Claim 17.** Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Payne further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (e.g., Payne teaches exchanging information between the merchant computer and the payment computer, which Payne says may be operated by different entities.) (*Payne*: Col. 1, lines 27-35) (*'519 Application*: Pg. 14, lines 9-18; Pg. 19, lines 7-14.) (See Appendix A, Element 67.)

(71) **Claim 18.** Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Payne further discloses an embodiment where there is a three-way transaction

between the first computing resources (*e.g.*, a merchant computer), the second computing resources (*e.g.*, a payment computer) and the user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 27-35; Col. 4, lines 35-45; Fig. 1) (*'519 Application*: Pg. 14, lines 9-18; Pg. 16, lines 5-14.) (*See Appendix A, Element 68.*)

(72) **Claim 19.** Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, *Payne* further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*e.g.*, *Payne* teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity with its own computing resources)) (*Payne*: Col. 4, lines 35-45; Col. 7, lines 24-27) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.) (*See Appendix A, Element 69.*)

SNQ 5. Ginter

Claims 1-19 of the '506 patent are obvious over Ginter.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by Ginter, alternatively, Claims 1-19 of the '506 patent are also obvious over Ginter, given the knowledge of one of ordinary skill in the art at the time that the application for the '506 application was filed.

A substantial new question is raised by Ginter as to Claims 1-19 of the '506 patent. Ginter was never disclosed by the Applicant, nor was it cited by the Examiner during the '506 patent's prior examination. Requester submits that a reasonable examiner would consider this teaching, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether

or not the claims are patentable. In particular, as set forth herein, Ginter contains or suggests each and every limitation of Claims 1-19. For this reason, Ginter raises a substantial new question of patentability with respect to Claims 1-19.

(73) **Claim 1.** Ginter discloses this claimed method in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79, 87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70).

As set forth in Claim 1, Ginter discloses a method for providing a service over a digital network. (*Ginter*: e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database services, information delivery and clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, "services-based" VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses sending first display information from a first computer system to a user device (*Ginter*: e.g., sending to a VDE display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes a control associated with a commercial service (*Ginter*: e.g., each VDE control (e.g., Figs. 5A, 5B, 30-31, 72B, 72C; 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63) is associated at least with VDE (a commercial service) and typically with some third-party commercial service as well, such as the creators, distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87)).

Ginter further discloses accepting a first signal in response to a user input to activate the control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by user actions selecting controls or selecting objects triggering the activation of associated controls, which activation signals other VDE nodes of the selection (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Ginter*: e.g., in each of the seven above-identified use scenarios, user-activation of a control often causes communication with a second computer system, such as a VDE repository, clearinghouse, content creator, content distributor, or financial services provider (e.g., 14:9-14, 19:16-57, 38:6-19, 38:60-39:2,

39:17-40:4, 52:4-6, 55:48-56:30, 181:13-182:16, 189:9-56, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-254:34, 264:37-48, 273:57-64, 280:43-281:2, 281:23-36, 285:57-286:13, 287:1-7, 287:63-289:23, 290:10-11, 298:33-309:33, 312:49-314:24, 314:26-44)).

Ginter further discloses using the second computer system for sending second display information to the user device (*Ginter*: e.g., in each of the seven above-identified use scenarios, the second computer system typically communicates display information to the user device (e.g., Figs. 72B-72D; 235:59-236:56, 236:60-237:7, 286:14-52, 287:16-21)), wherein the second display information sometimes includes a list of at least one commercial service (*Ginter*: e.g., (a) VDE Object Repositories send user devices display information which they can use to choose between a selection of objects and other commercial services (e.g., Figs. 72B-72D, 78, 84, 86/86A; 236:49-56, 236:60-237:6, 280:43-281:2, 285:57-286:13, 287:49-288:24, 288:43-67, 289:3-23, 290:10-11)); (b) in Other VDE Multi-Party Transactions, each of the “second computer systems” is as able as the “first computer system” to send the user device a catalog, menu or other list of object, control or other service choices (e.g., Figs. 3, 43a, 49; 52:4-6, 55:48-56:30, 168:61-172:5, 175:8-12, 175:36-55, 181:13-182:16, 189:9-56, 229:8-13, 236:60-237:7, 254:7-15, 264:37-48, 288:25-61, 296:16-28, 301:44-60, 303:65-304:39, 304:66-305:41, 308:53-309:33); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D; 38:6-19, 224:46-62); (d) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (e) VDE Docking Terminal (Figs. 7, 8, 71, 72B-72D; 39:17-40:4, 226:45-235:7); (f) VDE Smart Objects (e.g., Fig. 74; 273:57-64); and (g) Interactive N-Party Applications (e.g., 14:9-14)), and accepting a second signal in response to a user input to select a commercial service from the list (*Ginter*: e.g., user selections of a

commercial service send signals to other VDE devices (e.g., other parts of a distributed VDE repository) over the Internet (see, e.g., 18:45, 24:58, 36:12, 279:9, 310:7) or various other networks (e.g., 12:2-5, 86:2-7, 159:1-5, 280:34-43, 281:16-36, 285:58-286:13, 287:63-288:19)).

Ginter further discloses completing a commercial transaction relating to the selected commercial service (*Ginter*: e.g., Ginter discloses completion of transactions related to the user-selected commercial services identified above (e.g., 152:51, 175:8-12, 175:36-55, 178:26-27, 189:9-56, 243:43, 287:21, 288:23, 300:9, 315:15)).

Additionally, Ginter discloses associating an object identity with information entries and attributes (*Ginter*: e.g., Ginter discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30)), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)).

Ginter further discloses storing said information entries and said attributes in a virtual information store (*Ginter*: e.g., Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)).

Ginter further discloses assigning a unique network address to said object identity (*Ginter*: e.g., Ginter discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which

the object's contents are stored, and that this is sufficient to locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (See Appendix B, Elements 70-82).

(74) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, Ginter further discloses that the second computer system includes an object router (*Ginter*: e.g., Ginter discloses that any VDE node can include a processor (e.g., Figs. 8, 9) programmed to store and use "routing information" to locate, access, and transmit objects including executable objects (including services), using, e.g., a remote procedure call (RPC) manager (Figs. 12 (732), 13 (550); 79:39-42, 115:30-116:48), stream routers (88:48-67), and/or mail filters (104:57-64). (See generally Figs. 12 (770), 54; 97:12-22, 100:6-13, 100:48-57, 100:65-101:2, 189:9-31, 189:43-53)). (See Appendix B, Element 83).

(75) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, Ginter further discloses that the second computer system includes a virtual information store (*Ginter*: e.g., Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30, 31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). (See Appendix B, Element 84.)

(76) **Claim 4.** Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, Ginter further discloses that the second computer system includes a value-added network switch (*Ginter*: e.g., Ginter discloses that the VDE architecture provides a value added network that provides security, auditing, billing, payment and other services to value adding providers (280:27) and other VDE users (8:64, 9:17, 10:29, 11:7, 11:25-30, 21:31, 280:34-

42), including several types of switches including electronic switch 200a (Fig. 1; 52:63-67) and object switch 734 (Figs. 10, 12; 88:47-89:5, 97:12-22)). (See Appendix B, Element 85).

(77) **Claim 5.** Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, Ginter further discloses that the second computer system includes a legacy database (*Ginter*: e.g., Ginter's VDE is designed to work with pre-existing content including a wide range of legacy databases, including "LEXIS, Westlaw, and other related legal databases" (273:57-64), and "business, medical, legal, scientific, governmental, and consumer databases" (7:42-53) (e.g., 13:58-63, 131:59-132:8, 279:49, 280:25, 280:43-281:2)). (See Appendix B, Element 86).

(78) **Claim 6.** Claim 6 depends upon Claim 1. (See above.) As set forth in Claim 6, Ginter further discloses a control that includes a Web page control (*Ginter*: e.g., Ginter discloses implementing and using VDE with Web Servers, Web Browsers and Web Protocols, including URLs, HTTP and HTML (e.g., 100:31-37, 279:22-28, 280:34-65, 285:67-286:5, 287:16-25)). (See Appendix B, Element 87).

(79) **Claim 7.** Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Ginter further discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Ginter*: e.g., Ginter discloses that VDE users include users from multiple corporations (e.g., Figs. 85, 86; 13:58-66, 39:54, 253:22-39, 265:41, 274:31-40, 311:13-314:24)). For each of the seven use scenario categories identified above, Ginter discloses that the first computer system and second computer system may be operated by any of the wide range of VDE users, including separate corporations. (E.g., 4:17-44, 228:42-47). Ginter contains more than 130 references to a network, and shows VDE Object Repositories and VDE nodes connected to networks (e.g.,

networks 3304 and 3312 (Fig. 78), and network 672 (Fig. 70)). (E.g., 3:27-34, 11:29-33, 17:43-50, 73:53, 74:14-20, 159:1-15, 178:2-4, 222:40-47, 223:4-25)). (See Appendix B, Element 88).

(80) **Claim 8**. Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Ginter further discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Ginter*: e.g., Ginter broadly discloses that any business entities can communicate over networks under VDE control. Thus, the first corporate network can be operated by any VDE content creator, VDE content distributor, or VDE content end user, including any VDE financial services provider, as can the second corporate network. (E.g., Figs. 2, 2A, 8, 71, 74, 77-87; 14:9-16, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-317:20)). (See Appendix B, Element 89).

(81) **Claim 9**. Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, Ginter further discloses that the second computer system includes a legacy computing system (*Ginter*: e.g., Ginter discloses that a VDE node, in particular a clearinghouse, need not have special security hardware, but rather can be any computing system running VDE protection software (e.g., 13:3-13, 78:6-10, 103:8-16); e.g., any of a wide range of legacy databases (7:42-53, 13:58-63, 131:59-132:8, 273:57-64, 279:49, 280:25, 280:43-281:2)). (See Appendix B, Element 90).

(82) **Claim 10**. Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Ginter further discloses that the user device includes a Web browser (*Ginter*: e.g., Ginter discloses implementing and using VDE with Web Servers, Web Browsers and Web

Protocols, including URLs, HTTP and HTML (e.g., 100:31-37, 279:22-28, 280:34-65, 285:67-286:5, 287:16-25)). (See Appendix B, Element 91).

(83) **Claim 11**. Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Ginter further discloses that the display information includes Web page content (*Ginter*: e.g., Ginter discloses implementing and using VDE with Web Servers, Web Browsers and Web Protocols, including URLs, HTTP and HTML (e.g., 100:31-37, 279:22-28, 280:34-65, 285:67-286:5, 287:16-25)). (See Appendix B, Element 92).

(84) **Claim 12**. Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Ginter further discloses that the list of at least one commercial service includes a payment service (*Ginter*: e.g., Ginter discloses a wide range of payment services, and giving users the ability to select between different payment services. (E.g., 9:24-40, 14:51-65, 30:9-27, 32:28-30, 35:24-41, 233:44-234:31)). (See Appendix B, Element 93).

(85) **Claim 13**. Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Ginter further discloses that the user is provided with access to a payment electronic back office system (*Ginter*: e.g., Ginter discloses the user directly or indirectly accessing (broadly construed) the user's account at a VDE repository and/or bank and/or credit card company, which account typically would be maintained in a company's back office location. (E.g., 29:20-28, 52:11-13, 171:56-172:54, 177:54-178:4, 233:45-63, 287:49-62, 288:25-289:11)). (See Appendix B, Element 94)

(86) **Claim 14**. Ginter discloses this claimed apparatus in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79,

87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70). As set forth in Claim 14, Ginter discloses an apparatus for providing a service over a digital network. (*Ginter*: e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database services, information delivery and clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, "services-based" VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses a processor (*Ginter*: e.g., Ginter discloses that its VDE electronic appliances have at least one processor (e.g., Figs. 8 (CPU 654), 9 (microprocessor 520), 70 (SPUs and CPU), 71 (SPU and CPU)).

Ginter further discloses a machine-readable storage device including one or more instructions executable by the processor (*Ginter*: e.g., Ginter discloses processors which operate by executing instructions stored on some machine-readable storage device, and discloses many examples of a machine readable medium having data representing sequences of instructions (e.g., a Protected Processing Environment executing "load modules.") (e.g.,

Figs. 8-12; 21:8-20, 60:50-66, 63:57-64:2, 67:23-38)) for sending first display information from a first computer system to a user device (*Ginter*: e.g., sending to a VDE display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes a control associated with a commercial service (*Ginter*: e.g., each VDE control (e.g., Figs. 5A, 5B, 30-31, 72B, 72C; 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63) is associated at least with VDE (a commercial service) and often with some third-party commercial service as well, such as the providers, distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87)).

Ginter further discloses accepting a first signal in response to a user input to activate the control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by user actions selecting controls or selecting objects triggering the activation of associated controls (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Ginter*: e.g., in each of the seven above-identified use scenarios, user-activation of a control sometimes causes communication with a second computer system, such as a VDE repository, clearinghouse, content creator or content distributor, or financial services provider (e.g., 14:9-14, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 52:4-6, 55:48-56:30, 181:13-182:16, 189:9-56, 222:21-223:43, 224:46-62,

226:45-235:7, 236:60-237:6, 247:10-42, 253:22-254:34, 264:37-48, 273:57-64, 280:43-281:2, 281:23-36, 285:57-286:13, 287:1-7, 287:63-289:23, 290:10-11, 298:33-309:33, 312:49-314:24, 314:26-44)).

Ginter further discloses using the second computer system for sending second display information to the user device (*Ginter*: e.g., in each of the seven above-identified use scenarios, the second computer system typically communicates display information to the user device (e.g., Figs. 72B-72D; 235:59-236:56, 236:60-237:7, 286:14-52, 287:16-21)), wherein the second display information includes a list of at least one commercial service (*Ginter*: e.g., (a) VDE Object Repositories send user devices display information from which they can choose between a selection of objects and other commercial services (e.g., Figs. 72B-72D, 78, 84, 86/86A; 236:49-56, 236:60-237:6, 280:43-281:2, 285:57-286:13, 287:49-288:24, 288:43-67, 289:3-23, 290:10-11); (b) in Other VDE Multi-Party Transactions, each of the “second computer systems” is as able as the “first computer system” to send the user device a catalog, menu or other list of object, control or other service choices (e.g., Figs. 3, 43a, 49; 52:4-6, 55:48-56:30, 168:61-172:5, 175:8-12, 175:36-55, 181:13-182:16, 189:9-56, 229:8-13, 236:60-237:7, 254:7-15, 264:37-48, 288:25-61, 296:16-28, 301:44-60, 303:65-304:39, 304:66-305:41, 308:53-309:33); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D; 38:6-19, 224:46-62); (d) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (e) VDE Docking Terminal (Figs. 7, 8, 71, 72B-72D; 39:17-40:4, 226:45-235:7); (f) VDE Smart Objects (e.g., Fig. 74; 273:57-64); and (g) Interactive N-Party Applications (e.g., 14:9-14)), and accepting a second signal in response to a user input to select a commercial service from the list (*Ginter*: e.g., user selections of a commercial service send signals to other VDE devices (e.g., other parts of a distributed VDE

repository) over the Internet (see, e.g., 18:45, 24:58, 36:12, 279:9, 310:7) or various other networks (e.g., 12:2-5, 86:2-7, 159:1-5, 280:34-43, 281:16-36, 285:58-286:13, 287:63-288:19)). Ginter further discloses completing a commercial transaction relating to the selected commercial service (*Ginter*: e.g., Ginter discloses completion of transactions related to the user-selected commercial services identified above (e.g., 152:51, 175:8-12, 175:36-55, 178:26-27, 189:9-56, 243:43, 287:21, 288:23, 300:9, 315:15)).

Additionally, Ginter discloses associating an object identity with information entries and attributes (*Ginter*: e.g., Ginter discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)). Ginter further discloses storing said information entries and said attributes in a virtual information store (*Ginter*: e.g., Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). Ginter further discloses assigning a unique network address to said object identity (*Ginter*: e.g., Ginter discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which the object's contents are stored, and that this is sufficient to locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (*See* Appendix B, Elements 95-109).

(87) **Claim 15.** Ginter discloses this claimed method in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79, 87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70).

As set forth in Claim 15, Ginter discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Ginter*: e.g., Ginter discloses processors which operate by executing instructions stored on some machine-readable storage device, and discloses many examples of a machine readable medium having data representing sequences of instructions (e.g., a Protected Processing Environment executing “load modules.”) (e.g., Figs. 8-12; 21:8-20, 60:50-66, 63:57-64:2, 67:23-38), for providing commercial services, e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database services, information delivery and clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, “services-based” VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13,

232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Ginter*: e.g., sending to a VDE display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes a control associated with a commercial service (*Ginter*: e.g., each VDE control (e.g., Figs. 5A, 5B, 30-31, 72B, 72C; 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63) is associated at least with VDE (a commercial service) and often with some third-party commercial service as well, such as the providers, distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87)).

Ginter further discloses accepting a first signal in response to a user input to activate the control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by user actions selecting controls or selecting objects triggering the activation of associated controls (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Ginter*: e.g., in each of the seven above-identified use scenarios, user-activation of a control sometimes causes communication with a

second computer system, such as a VDE repository, clearinghouse, content creator or content distributor, or financial services provider (e.g., 14:9-14, 19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 52:4-6, 55:48-56:30, 181:13-182:16, 189:9-56, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-254:34, 264:37-48, 273:57-64, 280:43-281:2, 281:23-36, 285:57-286:13, 287:1-7, 287:63-289:23, 290:10-11, 298:33-309:33, 312:49-314:24, 314:26-44)).

Ginter further discloses using the second computer system for sending second display information to the user device (*Ginter*: e.g., in each of the seven above-identified use scenarios, the second computer system typically communicates display information to the user device (e.g., Figs. 72B-72D, 235:59-236:56, 236:60-237:7, 286:14-52, 287:16-21)), wherein the second display information includes a list of at least one commercial service (*Ginter*: e.g., (a) VDE Object Repositories send user devices display information from which they can choose between a selection of objects and other commercial services (e.g., Figs. 72B-72D, 78, 84, 86/86A; 236:49-56, 236:60-237:6, 280:43-281:2, 285:57-286:13, 287:49-288:24, 288:43-67, 289:3-23, 290:10-11); (b) in Other VDE Multi-Party Transactions, each of the “second computer systems” is as able as the “first computer system” to send the user device a catalog, menu or other list of object, control or other service choices (e.g., Figs. 3, 43a, 49; 52:4-6, 55:48-56:30, 168:61-172:5, 175:8-12, 175:36-55, 181:13-182:16, 189:9-56, 229:8-13, 236:60-237:7, 254:7-15, 264:37-48, 288:25-61, 296:16-28, 301:44-60, 303:65-304:39, 304:66-305:41, 308:53-309:33); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D; 38:6-19, 224:46-62); (d) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (e) VDE Docking Terminal (Figs. 7, 8, 71, 72B-72D; 39:17-40:4, 226:45-235:7); (f) VDE Smart Objects (e.g., Fig. 74; 273:57-64); and (g)

Interactive N-Party Applications (e.g., 14:9-14)), and accepting a second signal in response to a user input to select a commercial service from the list (*Ginter*: e.g., user selections of a commercial service send signals to other VDE devices (e.g., other parts of a distributed VDE repository) over the Internet (see, e.g., 18:45, 24:58, 36:12, 279:9, 310:7) or various other networks (e.g., 12:2-5, 86:2-7, 159:1-5, 280:34-43, 281:16-36, 285:58-286:13, 287:63-288:19)). *Ginter* further discloses completing a commercial transaction relating to the selected commercial service (*Ginter*: e.g., *Ginter* discloses completion of transactions related to the user-selected commercial services identified above (e.g., 152:51, 175:8-12, 175:36-55, 178:26-27, 189:9-56, 243:43, 287:21, 288:23, 300:9, 315:15)).

Additionally, *Ginter* discloses associating an object identity with information entries and attributes (*Ginter*: e.g., *Ginter* discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30)), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)). *Ginter* further discloses storing said information entries and said attributes in a virtual information store (*Ginter*: *Ginter* discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). *Ginter* further discloses assigning a unique network address to said object identity (*Ginter*: *Ginter* discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which the object's contents are stored, and that this is sufficient to

locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (See Appendix B, Elements 110-122).

(88) **Claim 16.** Ginter discloses this claimed method in connection with at least seven VDE use scenarios (which are not mutually exclusive): (a) VDE Object Repositories (e.g., Figs. 5, 7-8, 30-31, 72B-72D, 78, 84, and 86/86A); (b) Other VDE Multi-Party Transactions (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 49, 50, 54, 72B-72D, 77, 79, 87); (c) VDE Display Unit (e.g., Figs. 7, 8, 70, 72B-72D); (d) VDE Docking Terminal (e.g., Figs. 7, 8, 71, 72B-72D); (e) VDE Server With User Workstations (e.g., Fig. 8; 222:21-223:43); (f) VDE Smart Objects (e.g., Figs. 72B-72D, 74); and (g) Interactive N-Party Applications (e.g., 14:9-14). (See Appendix B, Element 70).

As set forth in Claim 16, Ginter discloses a method for providing a commercial service over a digital network. (*Ginter*: e.g., on-line services (e.g., 243:25, 279:47), legal research services (272:50, 273:61), other commercial database services, information delivery and clearinghouse services, credit-card, billing, and other financial services (229:8-13), home banking services, electronic negotiation services, “services-based” VDE control functions (e.g., 59:18, 70:65, 73:46, 87:6), and VDE system and infrastructure services, including network, channel, communication, database, backup, security, clearinghouse, object repository, and name services, etc. (e.g., 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses using first computing resources operated by a first business entity to send first display information to a user device (*Ginter*: e.g., sending to a VDE

display unit, portable unit, workstation, laptop, or other VDE user device, a menu, template, catalog or other user interface display of selections of multiple objects and/or controls from which to choose (e.g., Figs. 43a, 72B-72D; 17:27, 18:43, 19:16-57, 26:27-55, 38:60-39:2, 154:47-64, 175:8-12, 175:36-55, 222:21-223:43, 226:44-235:7, 236:4-49, 236:60-237:6, 247:10-42, 254:66-255:30, 285:57-286:52, 287:16-21, 287:49-288:24, 288:43-289:5, 296:16-28)), wherein the first display information includes first and second controls (*Ginter*: e.g., *Ginter*'s first and second controls can be any VDE object, instructions, user interface element or other information described in *Ginter* communicated to VDE users, from which users can choose. *Ginter* discloses plural controls being associated with each object or set of content that a user may be desire to access. (E.g., Figs. 5A, 5B, 30-31; 6:41-54, 27:9-17, 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63). (See also Figs. 43a, 72B-72D, 78, 86/86A; 17:27, 18:43, 19:16-57, 26:27-45, 38:60-39:2, 54:22-55:13, 56:31-57:29, 81:10-85:32, 124:65-126:63, 160:18-31, 175:8-12, 175:36-55, 231:10, 236:4-56, 236:60-237:7, 247:10-42, 254:66-255:30, 281:39-44, 281:59-282:2, 282:32, 283:3, 283:30, 285:57-286:52, 287:16-288:24, 288:43-67, 296:16-28)).

Ginter further discloses accepting a first signal in response to a user input to activate the first control (*Ginter*: e.g., all VDE controls are selected and activated directly or indirectly by user actions selecting controls or selecting objects triggering the activation of associated controls, which activation signals other VDE nodes of the selection (e.g., Figs. 72B, 72C; 7:10-23, 100:31-37, 236:60-237:6, 280:43-281:2)).

Ginter further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device

(*Ginter*: e.g., every control mentioned in *Ginter* is associated with a commercial service (e.g., VDE itself) and every commercial service is controlled by various controls. Many VDE controls are also associated with some third-party commercial service as well, such as the providers or distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87; 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Ginter further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (*Ginter*: e.g., every control mentioned in *Ginter* is associated with a commercial service (e.g., VDE itself) and every commercial service is controlled by various controls. Many VDE controls are also associated with some third-party commercial service as well, such as the providers or distributors or clearinghouses of VDE-protected content, including independent financial services providers (e.g., Figs. 1-2, 77-87; 6:32, 25:43, 26:14, 27:16, 37:26, 40:64, 43:1, 44:60, 51:47, 52:48, 59:18, 70:65, 73:46, 87:6, 88:29-45, 91:27, 91:44, 94:7, 100:38, 115:65-116:48, 123:7-15, 126:8, 129:8, 132:41, 223:41, 229:7-13, 232:50, 239:38, 240:55, 241:4, 249:55, 252:39-60, 257:13-21, 264:43-45, 279:60, 280:3, 280:23, 314:44)).

Additionally, Ginter discloses associating an object identity with information entries and attributes (*Ginter*: e.g., Ginter discloses that each VDE object has a unique VDE identifier (i.e., object identity) (e.g., 84:52-56, 155:29-30) and other information fields and attributes (e.g., Fig. 31; 154:65-67, 155:1-30)), wherein the object identity represents a networked object (*Ginter*: e.g., VDE objects are accessible via networks to which the VDE system has access, e.g., using a network address where content may be located, a URL, a file system reference, etc. (286:1-5)). Ginter further discloses storing said information entries and said attributes in a virtual information store (*Ginter*: Ginter discloses that information entries and attributes are stored in a virtual information store (e.g., a VDE repository and attendant content storage systems, including an object registration table) (Figs. 30-31; 151:43-152:10, 285:57-286:13, 287:49-288:24)). Ginter further discloses assigning a unique network address to said object identity (*Ginter*: e.g., Ginter discloses that a VDE object available on a VDE network is assigned a network address, URL, and/or file system reference to locate the physical location at which the object's contents are stored, and that this is sufficient to locate the user-requested content (e.g., 84:52-56, 99:49-54, 138:21-24, 211:17-22, 285:67-286:13)). (See Appendix B, Elements 123-135).

(89) **Claim 17.** Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Ginter further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*Ginter*: e.g., Ginter discloses that users can perform VDE-managed transactions involving user communications with two business entities, and communications between those two entities, in order to complete a transaction, such as three-way communications among a user, a repository, and a financial services provider (e.g., Figs. 2, 2A, 8, 70, 71, 74, 77-87; 14:9-16,

19:16-57, 38:6-19, 38:60-39:2, 39:17-40:4, 52:4-6, 61:30-36, 222:21-223:43, 224:46-62, 226:45-235:7, 236:60-237:6, 247:10-42, 253:22-317:20, 254:7-15, 264:37-48, 280:43-281:2, 281:23-36, 285:57-286:13, 287:1-7, 301:44-60)). (See Appendix B, Element 136).

(90) **Claim 18.** Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Ginter further discloses an embodiment where there is a three-way transaction between the first computing resources, the second computing resources and the user device (*Ginter:* e.g., Ginter discloses using VDE to engage in a wide range of three-way and n-way transactions, including negotiating VDE agreements among three or more parties and when registering, accessing, opening, or reading a protected objects (e.g., Figs. 3, 5, 30-31, 35, 41a-41d, 43, 45-48, 50, 54, 77, 79, 87, 72B-72D); 2:56-61, 86:28-34, :17-21, 9:37-40, 14:9-14, 19:9-15, 45:23-57, 16:13-20, 157:28-36, 248:38-40, 249:46-49, 279:18-21, 292:65-293:18)). (See Appendix B, Element 137).

(91) **Claim 19.** Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Ginter further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Ginter:* e.g., Ginter discloses that VDE users include users from multiple corporations (e.g., Figs. 85-86; 13:58-66, 39:54, 253:22-39, 265:41, 274:31-40, 311:13-314:24)). For each of the seven use scenario categories identified above, Ginter discloses that the first computer system and second computer system may be operated by any of the wide range of VDE users, including separate corporations. (E.g., 4:17-44, 228:42-47). Ginter contains more than 130 references to a network, and shows VDE Object Repositories and VDE nodes connected to networks (e.g., networks 3304 and 3312 (Fig. 78), and network

672 (Fig. 70)). (E.g., 3:27-34, 11:29-33, 17:43-50, 73:53, 74:14-20, 159:1-15, 178:2-4, 222:40-47, 223:4-25)). (See Appendix B, Element 138).

SNQ 6. Popp

Claims 1-19 of the '506 patent are obvious over Popp.

Although Requester submits that Claims 1-11, 14-16 and 19 of the '506 patent are anticipated by Popp, additionally and/or alternatively, Claims 1-19 of the '506 patent are also obvious over Popp, given the knowledge of one of ordinary skill in the art at the time that the application for the '506 application was filed.

A substantial new question is raised by Popp as to Claims 1-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was never considered in view of the Patent Owner's new statements regarding the scope of the claims. In particular, the Patent Owner's statements during the WebX litigation concerning what constitutes an object, an object identity, information entries and attributes, a virtual information store and a unique network address make clear that these elements were not novel, and that they existed in the prior art, including Popp. Popp may thus properly be considered as "old art" that is being presented in a new light. See MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp, including its inherent disclosure of these various elements that the Applicant added specifically to gain allowance over Popp, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp contains or suggests each and every limitation of Claims 1-19. For this reason, Popp raises a substantial new question of patentability with respect to Claims 1-19.

(92) **Claim 1.** As set forth in Claim 1, Popp discloses a method for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a

virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.)

Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (*See* Appendix C, Elements 139-151.)

(93) **Claim 2.** Claim 2 depends upon Claim 1. (*See* above.) As set forth in Claim 2, Popp further discloses that the second computer system includes an object router (*Popp*: Col. 3, lines 59-65; Col. 6, lines 49-52; Col. 6, line 63 – Col. 7, line 5; Col. 8, lines 49-59.) (*See* Appendix C, Element 152.)

(94) **Claim 3.** Claim 3 depends upon Claim 1. (*See* above.) As set forth in Claim 3, Popp further discloses that the second computer system includes a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-55.) (*See* Appendix C, Element 153.)

(95) **Claim 4.** Claim 4 depends upon Claim 1. (*See* above.) As set forth in Claim 4, Popp further discloses that the second computer system includes a value-added network switch (*Popp*: Col. 3, lines 59-65; Col. 8, lines 3-8, 17-31.) (*See* Appendix C, Element 154.)

(96) **Claim 5.** Claim 5 depends upon Claim 1. (*See* above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”) (*See* Appendix C, Element 155.)

(97) **Claim 6.** Claim 6 depends upon Claim 1. (*See* above.) As set forth in Claim 6, Popp further discloses a control that includes a Web page control (*Popp*: Col. 1, lines 26-

34; 3:59-65; Col. 4, lines 14-18; Col. 9, lines 10-12, 29-31; Col. 10, lines 19-28; Fig. 3B.)

(See Appendix C, Element 156.)

(98) **Claim 7.** Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 157.)

(99) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 158.)

(100) **Claim 9.** Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. See, e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, e.g., legacy database.") (See Appendix C, Element 159.)

(101) **Claim 10.** Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Popp further discloses that the user device includes a Web browser (*Popp*: Col. 1,

lines 26-34; 3:59-65; Col. 4, lines 5-18; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 160.)

(102) **Claim 11**. Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Popp further discloses that the display information includes Web page content (*Popp*: Col. 1, lines 26-34; Col. 4, lines 5-18; Col. 8, lines 44-48; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 161.)

(103) **Claim 12**. Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (See discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service. (See Appendix C, Element 162.)

(104) **Claim 13**. Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system. (See Appendix C, Element 163.)

(105) **Claim 14**. As set forth in Claim 14, Popp discloses an apparatus for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31; Fig. 1.) Popp further discloses a processor (*Popp*: Col. 6, lines 9-14.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31) for sending first display information from a

first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) *Popp* further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) *Popp* also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) *Popp* further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (*See* Appendix C, Elements 164-178.)

(106) **Claim 15.** As set forth in Claim 15, Popp discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp

further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (*See* Appendix C, Elements 179-191.)

(107) **Claim 16.** As set forth in Claim 16, *Popp* discloses a method for providing a commercial service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) *Popp* further discloses using first computing resources operated by a first business entity to send first display information to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes first and second controls (*Popp*: Col. 9, lines 27-28, 31-47, 56-65; Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses accepting a first signal in response to a user input to activate the first control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) *Popp* further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*Popp*: Col. 9, lines 31-47.) *Popp* further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (*Popp*: Col. 10, lines 19-28; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines

24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.) (See Appendix C, Elements 192-204.)

(108) **Claim 17**. Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (See, e.g., discussion of Claim 16, above.) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities. (See Appendix C, Element 205.)

(109) **Claim 18**. Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (See, e.g., discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction. (See Appendix C, Element 206.)

(110) **Claim 19**. Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in

view of Popp's disclosure of multiple computers (*See, e.g.*, discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities. (*See* Appendix C, Element 207.)

SNQ 7. Payne in view of Gifford

Claims 1-19 are obvious over Payne in view of Gifford.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by Payne, alternatively, Claims 1-19 are also obvious over Payne in view of Gifford.

A substantial new question is raised by Payne in view of Gifford as to Claims 1-19 of the '506 patent. Although it is prior art of record in the '506 patent, Payne's teachings as discussed below were not relied upon during the '506 patent's prior examination, nor were they discussed in view of the Gifford reference, which itself was not discussed by the Examiner during the original examination of the '506 patent. Neither Payne nor Gifford was relied upon in the rejection of any claims, nor was either reference discussed during the original examination. Payne in view of Gifford, therefore, may properly be considered as "old art" that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Payne in view of Gifford contains or suggests each and every limitation of Claims 1-19. For this reason, Payne in view of Gifford raises a substantial new question of patentability with respect to Claims 1-19.

(111) **Claim 1.** As set forth in Claim 1, Payne discloses a method for providing a service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16; Col. 10, lines 9-

20) (*'519 Application*: Pg. 11, lines 7-19.) Payne further discloses sending first display information from a first computer system (*e.g.*, a merchant computer) to a user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) (*'519 Application*: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (*e.g.*, a hypertext link allowing the user to purchase a product) (*Payne*: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) Payne further discloses accepting a first signal in response to a user input to activate the control (*e.g.*, upon selecting a product, Payne teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.) Payne also discloses initiating, in response to the first signal (*e.g.*, in response to the buyer selecting a product for purchase), communication between the user device (*e.g.*, the buyer computer) and a second computer system (*e.g.*, the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) Payne further discloses using the second computer system (*e.g.*, payment computer) for sending second display information to the user device (*e.g.*, the buyer computer) (*Payne*: Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application*: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (*e.g.*, Payne teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.)

Payne further discloses completing a commercial transaction relating to the selected commercial service (*e.g.*, Payne teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, Payne discloses associating an object identity with information entries and attributes (*e.g.*, Payne teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, Payne teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) Payne further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, Payne teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (*e.g.*, Payne teaches

using unique network addresses (i.e., URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*'519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.)

To the extent that any of these elements is deemed not disclosed by Payne, Gifford further discloses associating an object identity with information entries and attributes (*Gifford*: Col. 2, lines 53–55; Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 55-62; Col. 10, lines 30-42, 54-64; Col. 11, lines 60-63), wherein the object identity represents a networked object (*Gifford*: Col. 3, lines 15-21; Col. 5, lines 3-6; Col. 7, lines 30-38); storing said information entries and said attributes in a virtual information store (*Gifford*: Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 2-7; Col. 8, lines 13-20); and assigning a unique network address to said object identity (*Gifford*: Abstract; Col. 5, lines 1-6; Col. 5, lines 51-56; Col. 7, lines 20-38; Figs. 9-11.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Elements 1-13.)

(112) **Claim 2**. Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, Payne further discloses that the second computer system (*e.g.*, the payment computer) includes an object router (*e.g.*, the payment computer is capable of locating and accessing objects on the network) (*Payne*: Figs. 2F, 2G; Appendix E, page beginning with “Encoding

payment orders in URLs,” Exh. Pg. 128) (*‘519 Application*: Pg. 3, lines 11-14; Pg. 19, lines 15-23; Fig. 13; Pg. 23, lines 1-7; Fig. 14; Pg. 24, lines 16-24.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the second computer system includes an object router (*Gifford*: Col. 1, lines 63-66; Col. 7, line 66 – Col. 8, line 6; Fig. 13; Col. 9, lines 14-20; Fig. 14; Col. 9, lines 53-61.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 14.)

(113) **Claim 3**. Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, Payne further discloses that the second computer system (*e.g.*, the payment computer) includes a virtual information store (*Payne*: Col. 3, lines 47-51; Col. 5, lines 11-15; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the second computer system includes a virtual information store (*Gifford*: Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 2-7; Col. 8, lines 13-20.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is

substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 15.)

(114) **Claim 4**. Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, Payne further discloses that the second computer system (*e.g.*, the payment computer) includes a value-added network switch (*e.g.*, when a user selects a Web page control, such as clicking on a hyperlink to complete a payment transaction, a request is sent to switch from the Web application, or the Web page containing the link, to a transactional application, such as an application which checks the status of a user account, which application then processes and acts in response to a user request) (*'519 Application*: Pg. 3, lines 11-14; Pg. 19, lines 15-23; Figs. 13-14; Pg. 23, lines 1-7; Pg. 24, lines 16-24; Pg. 13, line 24 – Pg. 14, line 8.) Additionally, such a switch is inherent in Payne's disclosure of clicking on Web page links to invoke applications.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the second computer system includes a value-added network switch (*Gifford*: Col. 1, lines 63-66; Col. 7, line 66 – Col. 8, line 6; Col. 9, lines 14-20; Figs. 13-14; Col. 9, lines 53-61; Col. 5, line 60 – Col. 6, line 2.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 16.)

(115) **Claim 5**. Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, Payne further discloses that the second computer system includes a legacy database (*e.g.*,

Payne teaches using an “existing financial system network” with information about existing accounts, which inherently would involve the use of existing, or “legacy” databases containing such information) (*‘519 Application*: Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Col. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the second computer system includes a legacy database (*Gifford*: Col. 1, lines 36-40, 45-48, 50-53; Col. 2, lines 46-49; Col. 3, lines 46-48.)

In view of Gifford’s disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Payne’s invention would have been used to access any conventional databases, *e.g.*, a “legacy” database. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 17.)

(116) **Claim 6**. Claim 6 depends upon Claim 1. (See above.) As set forth in Claim 6, (Payne further discloses a control that includes a Web page control (*e.g.*, using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages, such as Mosaic pages) (*Payne*: Col. 10, lines 9-20; Col. 5, lines 26-27; Col. 6, lines 5-15; Figs. 5-14;

Appendix A, Exh. Pg. 38; Appendix E, page entitled "Shopping Cart Mechanism; how to write payment and shopping cart URLs," Exh. Pg. 130) (*'519 Application*: Pg. 11, lines 7-19; Pg. 12, lines 1-6, 15-18; Figs. 2-5, 8-11.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the control includes a Web page control (*Gifford*: Col. 4, line 61 – Col. 5, line 6; Col. 5, lines 13-17, 27-29; Figs. 2-5, 8-11.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '*519 Application*, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 18.)

(117) **Claim 7.** Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Payne further discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*e.g.*, the merchant computer and payment computer are owned and/or operated by different corporate entities, and therefore in different corporate "networks," though they operate on a common network, namely, the Internet). (*Payne*: Col. 4, lines 35-45) (*'519 Application*: Pg. 1, lines 19-22; Pg. 2, line 23 – Pg. 3, line 2; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the first computer system is in a first corporate network and wherein the second computer system is in a second corporate network (*Gifford*: Col. 1, lines 20-24, 50-53, 63-66; Col. 2, lines 16-32.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A, Element 19.*)

(118) **Claim 8.** Claim 8 depends upon Claim 7. (*See above.*) As set forth in Claim 8, Payne further discloses that the first corporate network (*e.g.*, the merchant computer) is operated by a first business entity and wherein the second corporate network (the payment computer) is operated by a second business entity (*e.g.*, Payne teaches having a merchant avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant, indicating that the merchant and entity making payment to the merchant are separate entities; Payne further teaches that the merchant computer and the payment computer may be operated by separate entities, thus implicitly or inherently disclosing separate “corporate networks”) (*Payne*: Col. 4, lines 35-45) (*‘519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Gifford*: Col. 1, lines 20-24. 63-66; Col. 2, lines 16-32.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is

substantially identical to the specification in the issued Gifford patent. (*See* Payne, Col. 1, lines 18-24.) (*See* Appendix A, Element 20.)

(119) **Claim 9**. Claim 9 depends upon Claim 1. (*See* above.) As set forth in Claim 9, Payne further discloses that the second computer system includes a legacy computing system (*e.g.*, Payne teaches using an “existing financial system network” with information about existing accounts, which inherently would involve the use of existing, or “legacy” computer systems containing such information) (*‘519 Application*: Pg. 2, lines 8-13. 18-20; Pg. 2, line 23 – Pg. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the second computer system includes a legacy computing system (*Gifford*: Col. 1, lines 36-40, 45-48, 50-53; Col. 2, lines 46-49; Col. 3, lines 46-48.)

In view of Gifford’s disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Payne’s invention would have been used to access any conventional computer systems, *e.g.*, a “legacy” computer system. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See* Payne, Col. 1, lines 18-24.) (*See* Appendix A, Element 21.)

(120) **Claim 10.** Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Payne further discloses that the user device includes a Web browser (*Payne*: Col. 1, lines 15-17; Col. 4, lines 43-45; Col. 5, lines 27-30; Col. 10, lines 9-20; Figs. 5-14) (*'519 Application*: Pg. 11, lines 7-19; Figs. 2-5 and 8-11.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses a user device that includes a Web browser (*Gifford*: Col. 4, line 61 – Col. 5, line 6; Figs. 2-5 and 8-11.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (See *Payne*, Col. 1, lines 18-24.) (See Appendix A, Element 22.)

(121) **Claim 11.** Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Payne further discloses that the display information includes Web page content (e.g., Payne teaches using the HTTP protocol, HTML, and URLs to control access to, and display of, Web pages, or Web page content) (*Payne*: Col. 10, lines 9-20; Appendix A, Exh. Pg. 38; Appendix E, page entitled “Shopping Cart Mechanism; how to write payment and shopping cart URLs,” Exh. Pg. 130; Figs. 5-14) (*'519 Application*: Pg. 11, lines 7-19; Pg. 12, lines 1-6; Pg. 12, lines 15-18; Figs. 2-5 and 8-11.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses display information that includes Web page content (*Gifford*: Col. 4, line 61 – Col. 5, line 6; Col. 5, lines 13-17; Col. 5, lines 27-29; Figs. 2-5 and 8-11.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 23.)

(122) **Claim 12**. Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Payne further discloses that the list of at least one commercial service includes a payment service (*e.g.*, Payne provides an option of opening an account to make payments, as well as making a payment using such an account) (*Payne*: Col. 6, lines 1-14, 15-30, 31-42; Col. 6, line 43 – Col. 7, line 50.) (*See Appendix A*, Element 24.)

(123) **Claim 13**. Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Payne further discloses that the user is provided with access to a payment electronic back office system (*e.g.*, Payne teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) (*‘519 Application*: Pg. 2, lines 18-20; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses providing a user with access to a payment electronic back office system (*Gifford*: Col. 1, lines 45-48; Col. 2, lines 46-49; Col. 3, lines 46-48.)

In view of Gifford’s disclosure of using his system with existing financial networks, including banks, to authorize payments and other debits from a user’s account, it would have been obvious to one skilled in the art that Payne’s invention would have been used to access a bank back office system. This is made even clearer when looking at how Applicant described accessing a bank back office system. Applicant describes a user being provided

access to a payment electronic back office system as follows: "Once Bank POSvc application 510 has been activated, user 100 will be able to connect to Bank services and utilize the application to perform banking transactions, thus accessing data from a host or data repository 575 in the Bank "Back Office." This description is similar, if not identical, to the services provided in Payne. ('506 patent, Col. 7, lines 32-36)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (See Payne, Col. 1, lines 18-24.) (See Appendix A, Element 24.)

(124) **Claim 14**. As set forth in Claim 14, Payne discloses an apparatus for providing a service over a digital network. (Payne: Title; Abstract; Col.1, lines 14-16)('519 Application: Pg. 11, lines 7-19.) Payne further discloses a processor (e.g., Payne teaches multiple computers which are capable of processing instructions, and therefore explicitly or inherently discloses processors) (Payne: Col. 2, lines 43-65; Col. 3, lines 38-42; Col. 8, lines 25-31.) Payne further discloses a machine-readable storage device including one or more instructions executable by the processor (e.g., Payne discloses computers which have access to databases for storage of information, and further discloses those computers executing or processing instructions) (Payne: Col. 2, lines 43-65; Col. 3, lines 38-42; Col. 4, lines 52-65; Fig. 1) ('519 Application: Pg. 10, line 23 – Pg. 11, line 2) for sending first display information from a first computer system (e.g., a merchant computer) to a user device (e.g., a buyer computer) (Payne: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) ('519 Application: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes

a control associated with a commercial service (e.g., a hypertext link allowing the user to purchase a product) (*Payne*: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) *Payne* further discloses accepting a first signal in response to a user input to activate the control (e.g., upon selecting a product, *Payne* teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.) *Payne* also discloses initiating, in response to the first signal (e.g., in response to the buyer selecting a product for purchase), communication between the user device (e.g., the buyer computer) and a second computer system (e.g., the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) *Payne* further discloses using the second computer system (e.g., payment computer) for sending second display information to the user device (e.g., the buyer computer) (*Payne*: Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application*: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (e.g., *Payne* teaches sending display information including providing an option of opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.) *Payne* further discloses completing a commercial transaction relating to the selected commercial service (e.g., *Payne* teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase

with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, *Payne* discloses associating an object identity with information entries and attributes (*e.g.*, *Payne* teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) *Payne* further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, *Payne* teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) *Payne* further discloses assigning a unique network address to said object identity (*e.g.*, *Payne* teaches using unique network addresses (*i.e.*, URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109;

Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*'519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.)

To the extent that any of these elements is deemed not disclosed by Payne, Gifford further discloses associating an object identity with information entries and attributes (*Gifford*: Col. 2, lines 53-55; Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 55-62; Col. 10, lines 30-42, 54-64; Col. 11, lines 60-63), wherein the object identity represents a networked object (*Gifford*: Col. 3, lines 15-21; Col. 5, lines 3-6; Col. 7, lines 30-38); storing said information entries and said attributes in a virtual information store (*Gifford*: Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 2-7; Col. 8, lines 13-20); and assigning a unique network address to said object identity (*Gifford*: Abstract; Col. 5, lines 1-6; Col. 5, lines 51-56; Col. 7, lines 20-38; Figs. 9-11.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Elements 26-40.)

(125) **Claim 15**. As set forth in Claim 15, Payne discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*e.g.*, Payne teaches computers which have access to databases for storage of information, and further discloses computers which are capable of processing instructions, and therefore explicitly or inherently discloses processors for providing a commercial service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16, 24-27; Col. 2, lines 43-65; Col. 3, lines 29-34, 38-42; Col. 4, lines 52-65; Col. 5, lines 16-25;

Col. 8, lines 25-31; Fig. 1) (*'519 Application*: Pg. 11, lines 7-19, 20-22; Pg. 10, line 23 – Pg. 11, line 2.) Payne further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system (*e.g.*, a merchant computer) to a user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 24-27; Col. 3, lines 29-34; Col. 5, lines 16-25; Fig. 5) (*'519 Application*: Pg. 11, lines 20-22; Fig 2), wherein the first display information includes a control associated with a commercial service (*e.g.*, a hypertext link allowing the user to purchase a product) (*Payne*: Col. 5, lines 27-30; Col. 3, lines 29-34) (*'519 Application*: Pg. 11, lines 20-24.) Payne further discloses accepting a first signal in response to a user input to activate the control (*e.g.*, upon selecting a product, Payne teaches sending a signal, which is accepted either by the merchant computer, or by the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 48-52) (*'519 Application*: Pg. 11, lines 20-24.) Payne also discloses initiating, in response to the first signal (*e.g.*, in response to the buyer selecting a product for purchase), communication between the user device (*e.g.*, the buyer computer) and a second computer system (*e.g.*, the payment computer) (*Payne*: Col. 5, lines 27-30; Col. 5, lines 52-56) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 18, lines 13-24.) Payne further discloses using the second computer system (*e.g.*, payment computer) for sending second display information to the user device (*e.g.*, the buyer computer) (*Payne*: Col. 4, lines 8-10; Fig. 6; Col. 4, lines 15-19; Fig. 9; Col. 5, line 57 – Col. 6, line 14) (*'519 Application*: Pg. 18, lines 17-24), wherein the second display information includes a list of at least one commercial service (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Fig. 6), and accepting a second signal in response to a user input to select a commercial service from the list (*e.g.*, Payne teaches sending display information including providing an option of

opening an account or completing a payment transaction, and allows the user to select one of these services from this list) (*Payne*: Col. 6, lines 1-14; Col. 6, lines 31-42; Figs. 2C, 2D.)

Payne further discloses completing a commercial transaction relating to the selected commercial service (*e.g.*, *Payne* teaches completing the opening of an account, which is a commercial service, and further teaches additionally or alternatively completing a purchase with that account, which is also a commercial service) (*Payne*: Col. 6, lines 15-30; Col. 6, lines 31-42; Col. 6, line 43 – Col. 7, line 50; Figs. 2H, 2I, 10.)

Additionally, *Payne* discloses associating an object identity with information entries and attributes (*e.g.*, *Payne* teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, *Payne* teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) *Payne* further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, *Payne* teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3;

Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (*e.g.*, Payne teaches using unique network addresses (*i.e.*, URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*'519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.)

To the extent that any of these elements is deemed not disclosed by Payne, Gifford further discloses associating an object identity with information entries and attributes (*Gifford*: Col. 2, lines 53-55; Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 55-62; Col. 10, lines 30-42, 54-64; Col. 11, lines 60-63), wherein the object identity represents a networked object (*Gifford*: Col. 3, lines 15-21; Col. 5, lines 3-6; Col. 7, lines 30-38); storing said information entries and said attributes in a virtual information store (*Gifford*: Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 2-7; Col. 8, lines 13-20); and assigning a unique network address to said object identity (*Gifford*: Abstract; Col. 5, lines 1-6; Col. 5, lines 51-56; Col. 7, lines 20-38; Figs. 9-11.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Elements 41-53.)

(126) **Claim 16**. As set forth in Claim 16, Payne discloses a method for providing a commercial service over a digital network. (*Payne*: Title; Abstract; Col. 1, lines 14-16) (*'519 Application*: Pg. 11, lines 7-19.) Payne further discloses using first computing

resources operated by a first business entity to send first display information to a user device (e.g., Payne teaches that the payment computer sends a display document to the buyer computer (*Payne*: Col. 6, lines 1-14; Figs. 2C, 6), wherein the first display information includes first and second controls (e.g., Payne teaches that the document sent from the payment computer to the buyer computer includes controls both for opening an account, and for retrieving a requested document (*Payne*: Col. 6, lines 1-14; Fig. 6.) Payne further discloses accepting a first signal in response to a user input to activate the first control (e.g., Payne teaches sending a signal to the payment computer when the user clicks on the “open” button to open an account (*Payne*: Col. 6, lines 15-30; Fig. 2C.) Payne further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (e.g., Payne teaches opening an account in response to the first signal, under the control of the payment computer, which interacts with the buyer computer (*Payne*: Col. 6, lines 15-30; Figs. 2C, 2D.) Payne further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (e.g., Payne teaches sending a second signal when the user clicks on the “continue” button, which leads to a user requesting to purchase an object, with the request being fulfilled by the merchant computer, which has separate resources from the operator of the payment computer (*Payne*: Col. 4, lines 35-45, Col. 6, lines 31-42; Col. 7, lines 31-50; Figs. 2H, 2I.)

Additionally, Payne discloses associating an object identity with information entries and attributes (*e.g.*, Payne teaches a system for uniquely naming objects, and having these objects associated with information entries and attributes) (*Payne*: Col. 5, lines 27-46; Fig. 10; Appendix D, Pgs. 2-3, Exh. Pgs. 103-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164) (*‘519 Application*: Pg. 5, lines 19-22; Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; Pg. 21, line 24 – Pg. 25, line 6; Pg. 26, lines 10-22; Pg. 27, lines 10-19; Pg. 30, lines 10-13), wherein the object identity represents a networked object (*e.g.*, Payne teaches that an object name (object identity) will represent a network object) (*Payne*: Col. 4, lines 43-45; Appendix D, Pgs. 1-3, Exh. Pgs. 102-104; Appendix E, Pgs. 5, 9, Exh. Pgs. 128, 136) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 11, lines 16-19; Pg. 18, lines 4-12.) Payne further discloses storing said information entries and said attributes in a virtual information store (*e.g.*, Payne teaches storing product and order and other information (entries and attributes) in a virtual information store) (*Payne*: Col. 4, lines 46-49; Col. 7, lines 18-30; Fig. 10; Appendix D, Pg. 5, Exh. Pg. 106; Appendix E, Pgs. 6, 9, Exh. Pg. 130, 136; Appendix F, page entitled “CustItemEntryPage.cgi,” Exh. Pg. 164.) (*‘519 Application*: Pg. 6, line 21 – Col. 7, line 3; Pg. 10, line 23 – Col. 11, line 2; page 19, lines 19-24; Pg. 20, lines 5-12.) Payne further discloses assigning a unique network address to said object identity (*e.g.*, Payne teaches using unique network addresses (*i.e.*, URLs) to identify objects) (*Payne*: Col. 5, lines 43-47; Fig. 12; Col. 7, lines 18-27; Appendix D, Pgs. 2-3, 5, 8, Exh. Pgs. 103-104, 106, 109; Appendix E, Pgs. 5, 9, 10, Exh. Pgs. 128, 136, 138) (*‘519 Application*: Abstract; Pg. 11, lines 14-19; Pg. 13, lines 15-20; Pg. 17, line 18 – Pg. 18, line 12; Figs. 9-11.)

To the extent that any of these elements is deemed not disclosed by Payne, Gifford further discloses associating an object identity with information entries and attributes (*Gifford*: Col. 2, lines 53–55; Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 55-62; Col. 10, lines 30-42, 54-64; Col. 11, lines 60-63), wherein the object identity represents a networked object (*Gifford*: Col. 3, lines 15-21; Col. 5, lines 3-6; Col. 7, lines 30-38); storing said information entries and said attributes in a virtual information store (*Gifford*: Col. 3, lines 15-21; Col. 4, lines 53-56; Col. 8, lines 2-7; Col. 8, lines 13-20); and assigning a unique network address to said object identity (*Gifford*: Abstract; Col. 5, lines 1-6; Col. 5, lines 51-56; Col. 7, lines 20-38; Figs. 9-11.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Elements 54-66.)

(127) **Claim 17**. Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Payne further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*e.g.*, Payne teaches exchanging information between the merchant computer and the payment computer, which Payne says may be operated by different entities.) (*Payne*: Col. 1, lines 27-35) (*‘519 Application*: Pg. 14, lines 9-18; Pg. 19, lines 7-14.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses exchanging information between the first and second business entities in order to complete a

transaction in response to one or more of the signals (*Gifford*: Col. 6, lines 3-13; Col. 7, lines 56-63.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 67.)

(128) **Claim 18**. Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Payne further discloses an embodiment where there is a three-way transaction between the first computing resources (*e.g.*, a merchant computer), the second computing resources (*e.g.*, a payment computer) and the user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 27-35; Col. 4, lines 35-45; Fig. 1) (*‘519 Application*: Pg. 14, lines 9-18; Pg. 16, lines 5-14.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that a three-way transaction is achieved between the first computing resources, the second computing resources and the user device (*Gifford*: Col. 6, lines 3-13; Col. 6, lines 50-59.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 68.)

(129) **Claim 19**. Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Payne further discloses that a plurality of computing resources are used, each on a

separate corporate network, and each operated by one of a plurality of different business entities (e.g., Payne teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity with its own computing resources)) (*Payne*: Col. 4, lines 35-45; Col. 7, lines 24-27) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Gifford*: Col. 1, lines 20-24, 63-66; Col. 2, lines 16-32.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '*519 Application*, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix A*, Element 69.)

SNQ 8. Popp in view of Rose RFC 1155

Claims 1-19 of the '*506 patent are obvious over Popp in view of Rose RFC 1155.*

Although Requester submits that Claims 1-19 of the '*506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 1-19 of the '*506 patent are also obvious over Popp in view of Rose RFC 1155.**

A substantial new question is raised by Popp in view of Rose RFC 1155 as to Claims 1-19 of the '*506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '*506 patent's prior examination, Popp was never considered in view of Rose RFC 1155, which is "new art" that was never disclosed by the**

Applicant or considered by the Examiner during the original examination of the '506 patent. Popp may thus properly be considered as "old art" that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of Rose RFC 1155, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of Rose RFC 1155 contains or suggests each and every limitation of Claims 1-19. For this reason, Popp in view of Rose RFC 1155 raises a substantial new question of patentability with respect to Claims 1-19.

(130) **Claim 1.** As set forth in Claim 1, Popp discloses a method for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.)

Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, Rose RFC 1155 discloses associating an object identity with information entries and attributes (*Rose RFC 1155*: Pgs. 4, 10-11), wherein the object identity represents a networked object (*Rose RFC 1155*: Pgs. 4-5, 11.) Rose RFC 1155 further discloses storing said information entries and said attributes in a virtual information store (*Rose RFC 1155*: Pgs. 4, 10-11.) Rose RFC 1155 further discloses assigning a unique network address to said object identity (*Rose RFC 1155*: Pgs. 7-8, 11-13.)

The motivation to combine Popp with Rose RFC 1155 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and Rose RFC 1155 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art

would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp. (See Appendix C, Elements 139-151.)

(131) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, Popp further discloses that the second computer system includes an object router (*Popp*: Col. 3, lines 59-65; Col. 6, lines 49-52; Col. 6, line 63 – Col. 7, line 5; Col. 8, lines 49-59.) (See Appendix C, Element 152.)

(132) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, Popp further discloses that the second computer system includes a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-55.) Alternatively, it would have been obvious that the virtual information store disclosed in Popp and/or Rose RFC 1155 would be on the second computer system. (See Appendix C, Element 153.)

(133) **Claim 4.** Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, Popp further discloses that the second computer system includes a value-added network switch (*Popp*: Col. 3, lines 59-65; Col. 8, lines 3-8, 17-31.) (See Appendix C, Element 154.)

(134) **Claim 5.** Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) See, e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, e.g., legacy database.”) (See Appendix C, Element 155.)

(135) **Claim 6.** Claim 6 depends upon Claim 1. (See above.) As set forth in Claim 6, Popp further discloses a control that includes a Web page control (*Popp*: Col. 1, lines 26-

34; 3:59-65; Col. 4, lines 14-18; Col. 9, lines 10-12, 29-31; Col. 10, lines 19-28; Fig. 3B.)

(See Appendix C, Element 156.)

(136) **Claim 7.** Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 157.)

(137) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 158.)

(138) **Claim 9.** Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. See, e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, e.g., legacy database.") (See Appendix C, Element 159.)

(139) **Claim 10.** Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Popp further discloses that the user device includes a Web browser (*Popp*: Col. 1,

lines 26-34; 3:59-65; Col. 4, lines 5-18; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 160.)

(140) **Claim 11.** Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Popp further discloses that the display information includes Web page content (*Popp*: Col. 1, lines 26-34; Col. 4, lines 5-18; Col. 8, lines 44-48; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 161.)

(141) **Claim 12.** Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (See discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service. (See Appendix C, Element 162.)

(142) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system. (See Appendix C, Element 163.)

(143) **Claim 14.** As set forth in Claim 14, Popp discloses an apparatus for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31; Fig. 1.) Popp further discloses a processor (*Popp*: Col. 6, lines 9-14.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31) for sending first display information from a

first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) *Popp* further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) *Popp* also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) *Popp* further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, Rose RFC 1155 discloses associating an object identity with information entries and attributes (*Rose RFC 1155*: Pgs. 4, 10-11), wherein the object identity represents a networked object (*Rose RFC 1155*: Pgs. 4-5, 11.) Rose RFC 1155 further discloses storing said information entries and said attributes in a virtual information store (*Rose RFC 1155*: Pgs. 4, 10-11.) Rose RFC 1155 further discloses assigning a unique network address to said object identity (*Rose RFC 1155*: Pgs. 7-8, 11-13.)

The motivation to combine Popp with Rose RFC 1155 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and Rose RFC 1155 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp. (See Appendix C, Elements 164-178.)

(144) **Claim 15.** As set forth in Claim 15, Popp discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between

the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) *Popp* further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in *Popp*, *Rose RFC 1155* discloses associating an object identity with information entries and attributes (*Rose RFC 1155*: Pgs. 4, 10-11), wherein the object identity represents a networked object (*Rose RFC 1155*: Pgs. 4-5, 11.) *Rose RFC 1155* further discloses storing said information entries and said attributes in a virtual information store (*Rose RFC 1155*: Pgs. 4, 10-11.) *Rose RFC 1155* further

discloses assigning a unique network address to said object identity (*Rose RFC 1155*: Pgs. 7-8, 11-13.)

The motivation to combine Popp with Rose RFC 1155 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and Rose RFC 1155 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp. (*See Appendix C, Elements 179-191.*)

(145) **Claim 16.** As set forth in Claim 16, Popp discloses a method for providing a commercial service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses using first computing resources operated by a first business entity to send first display information to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes first and second controls (*Popp*: Col. 9, lines 27-28, 31-47, 56-65; Col. 10, lines 19-28; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the first control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*Popp*: Col. 9, lines 31-47.) Popp further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second

computing resources and interacting with the user device (*Popp*: Col. 10, lines 19-28; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26–31, 53–55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, Rose RFC 1155 discloses associating an object identity with information entries and attributes (*Rose RFC 1155*: Pgs. 4, 10-11), wherein the object identity represents a networked object (*Rose RFC 1155*: Pgs. 4-5, 11.) Rose RFC 1155 further discloses storing said information entries and said attributes in a virtual information store (*Rose RFC 1155*: Pgs. 4, 10-11.) Rose RFC 1155 further discloses assigning a unique network address to said object identity (*Rose RFC 1155*: Pgs. 7-8, 11-13.)

The motivation to combine Popp with Rose RFC 1155 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and Rose RFC 1155 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art

would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp. (*See* Appendix C, Elements 192-204.)

(146) **Claim 17**. Claim 17 depends upon Claim 16. (*See* above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g.,* discussion of Claim 16, above.) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities. (*See* Appendix C, Element 205.)

(147) **Claim 18**. Claim 18 depends upon Claim 16. (*See* above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (*See, e.g.,* discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction. (*See* Appendix C, Element 206.)

(148) **Claim 19**. Claim 19 depends upon Claim 16. (*See* above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.,* discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities. (*See* Appendix C, Element 207.)

SNQ 9. Popp in view of McCloghrie RFC 1213

Claims 1-19 of the '506 patent are obvious over Popp in view of McCloghrie RFC 1213.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 1-19 of the '506 patent are also obvious over Popp in view of McCloghrie RFC 1213.

A substantial new question is raised by Popp in view of McCloghrie RFC 1213 as to Claims 1-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was never considered in view of McCloghrie RFC 1213, which is "new art" that was never disclosed by the Applicant or considered by the Examiner during the original examination of the '506 patent. Popp may thus properly be considered as "old art" that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of McCloghrie RFC 1213, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of McCloghrie RFC 1213 contains or suggests each and every limitation of Claims 1-19. For this reason, Popp in view of McCloghrie RFC 1213 raises a substantial new question of patentability with respect to Claims 1-19.

(149) **Claim 1.** As set forth in Claim 1, Popp discloses a method for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.)

Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, McCloghrie RFC 1213 discloses associating an object identity with information entries and attributes (*McCloghrie*

RFC 1213: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) *McCloghrie RFC 1213* further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) *McCloghrie RFC 1213* further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with *McCloghrie RFC 1213* is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and *McCloghrie RFC 1213* discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in *RFC 1155* in developing a system such as the one disclosed in Popp. (See Appendix C, Elements 139-151.)

(150) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, Popp further discloses that the second computer system includes an object router (*Popp*: Col. 3, lines 59-65; Col. 6, lines 49-52; Col. 6, line 63 – Col. 7, line 5; Col. 8, lines 49-59.) (See Appendix C, Element 152.)

(151) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, Popp further discloses that the second computer system includes a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-55.) Alternatively, it would have been obvious that the virtual information store disclosed in Popp and/or *McCloghrie RFC 1213* would be on the second computer system. (See Appendix C, Element 153.)

(152) **Claim 4**. Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, Popp further discloses that the second computer system includes a value-added network switch (*Popp*: Col. 3, lines 59-65; Col. 8, lines 3-8, 17-31.) (*See* Appendix C, Element 154.)

(153) **Claim 5**. Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”) (*See* Appendix C, Element 155.)

(154) **Claim 6**. Claim 6 depends upon Claim 1. (See above.) As set forth in Claim 6, Popp further discloses a control that includes a Web page control (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 14-18; Col. 9, lines 10-12, 29-31; Col. 10, lines 19-28; Fig. 3B.) (*See* Appendix C, Element 156.)

(155) **Claim 7**. Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (*See* Appendix C, Element 157.)

(156) **Claim 8**. Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (*See* Appendix C, Element 158.)

(157) **Claim 9**. Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.") (See Appendix C, Element 159.)

(158) **Claim 10**. Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Popp further discloses that the user device includes a Web browser (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 5-18; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 160.)

(159) **Claim 11**. Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Popp further discloses that the display information includes Web page content (*Popp*: Col. 1, lines 26-34; Col. 4, lines 5-18; Col. 8, lines 44-48; Col. 9, lines 10-12, 29-31; Fig. 3B.) (See Appendix C, Element 161.)

(160) **Claim 12**. Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (See discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service. (See Appendix C, Element 162.)

(161) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system. (See Appendix C, Element 163.)

(162) **Claim 14.** As set forth in Claim 14, Popp discloses an apparatus for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31; Fig. 1.) Popp further discloses a processor (*Popp*: Col. 6, lines 9-14.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31) for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-

28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, McCloghrie RFC 1213 discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) McCloghrie RFC 1213 further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) McCloghrie RFC 1213 further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework

for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp. (*See* Appendix C, Elements 164-178.)

(163) **Claim 15.** As set forth in Claim 15, Popp discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26–31, 53–55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, McCloghrie RFC 1213 discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) McCloghrie RFC 1213 further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) McCloghrie RFC 1213 further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp. (*See Appendix C, Elements 179-191.*)

(164) **Claim 16.** As set forth in Claim 16, Popp discloses a method for providing a commercial service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses using first computing resources operated by a first business entity to send first display information to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes first and second controls (*Popp*: Col. 9, lines 27-28, 31-47, 56-65; Col. 10, lines 19-28; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the first control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*Popp*: Col. 9, lines 31-47.) Popp further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (*Popp*: Col. 10, lines 19-28; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.)

Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, McCloghrie RFC 1213 discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) McCloghrie RFC 1213 further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) McCloghrie RFC 1213 further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp. (*See Appendix C, Elements 192-204.*)

(165) **Claim 17.** Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g., discussion of Claim 16, above.*) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities. (*See Appendix C, Element 205.*)

(166) **Claim 18.** Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (See, e.g., discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction. (See Appendix C, Element 206.)

(167) **Claim 19.** Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (Popp: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (See, e.g., discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities. (See Appendix C, Element 207.)

**SNQ 10. Popp in view of McCloghrie RFC 1213,
in further view of McCloghrie RFC 1447**

Claims 1-19 of the '506 patent are obvious over Popp in view of McCloghrie RFC 1213, in further view of McCloghrie RFC 1447.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 1-19 of the '506 patent are also obvious over Popp in view of McCloghrie RFC 1213, in further view of McCloghrie RFC 1447.

A substantial new question is raised by Popp in view of McCloghrie RFC 1213 as to Claims 1-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was

never considered in view of McCloghrie RFC 1213 or McCloghrie RFC 1447, each of which is “new art” that was never disclosed by the Applicant or considered by the Examiner during the original examination of the ‘506 patent. Popp may thus properly be considered as “old art” that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of McCloghrie RFC 1213, in further view of McCloghrie RFC 1447, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of McCloghrie RFC 1213, in further view of McCloghrie RFC 1447, contains or suggests each and every limitation of Claims 1-19. For this reason, Popp in view of McCloghrie RFC 1213, in further view of McCloghrie RFC 1447, raises a substantial new question of patentability with respect to Claims 1-19.

(168) **Claim 1.** As set forth in Claim 1, Popp discloses a method for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the

second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in *Popp*, *McCloghrie RFC 1213* discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) *McCloghrie RFC 1213* further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) *McCloghrie RFC 1213* further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

McCloghrie RFC 1447 further discloses another example of a unique network address, that is virtually identical to the unique network address disclosed in the '506 patent. (*McCloghrie RFC 1447*: Pg. 8, ¶ 2; Pg. 9, ¶ 2; Pg. 10, ¶ 2.)

It would have been obvious to further combine the McCloghrie RFC 1447 and McCloghrie RFC 1213 references, as the McCloghrie RFC 1447 reference simply discloses another version of the management information base disclosed in McCloghrie RFC 1213, and both were known at the time that the Popp application was filed. (*See Appendix C, Elements 139-151.*)

(169) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, Popp further discloses that the second computer system includes an object router (*Popp*: Col. 3, lines 59-65; Col. 6, lines 49-52; Col. 6, line 63 – Col. 7, line 5; Col. 8, lines 49-59.) (*See Appendix C, Element 152.*)

(170) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, Popp further discloses that the second computer system includes a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-55.) Alternatively, it would have been obvious that the virtual information store disclosed in Popp and/or McCloghrie RFC 1213 would be on the second computer system. (*See Appendix C, Element 153.*)

(171) **Claim 4.** Claim 4 depends upon Claim 1. (See above.) As set forth in Claim 4, Popp further discloses that the second computer system includes a value-added network switch (*Popp*: Col. 3, lines 59-65; Col. 8, lines 3-8, 17-31.) (See Appendix C, Element 154.)

(172) **Claim 5.** Claim 5 depends upon Claim 1. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) See, e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, e.g., legacy database.”) (See Appendix C, Element 155.)

(173) **Claim 6.** Claim 6 depends upon Claim 1. (See above.) As set forth in Claim 6, Popp further discloses a control that includes a Web page control (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 14-18; Col. 9, lines 10-12, 29-31; Col. 10, lines 19-28; Fig. 3B.) (See Appendix C, Element 156.)

(174) **Claim 7.** Claim 7 depends upon Claim 1. (See above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 157.)

(175) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (See Appendix C, Element 158.)

(176) **Claim 9**. Claim 9 depends upon Claim 1. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.") (*See* Appendix C, Element 159.)

(177) **Claim 10**. Claim 10 depends upon Claim 1. (See above.) As set forth in Claim 10, Popp further discloses that the user device includes a Web browser (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 5-18; Col. 9, lines 10-12, 29-31; Fig. 3B.) (*See* Appendix C, Element 160.)

(178) **Claim 11**. Claim 11 depends upon Claim 10. (See above.) As set forth in Claim 11, Popp further discloses that the display information includes Web page content (*Popp*: Col. 1, lines 26-34; Col. 4, lines 5-18; Col. 8, lines 44-48; Col. 9, lines 10-12, 29-31; Fig. 3B.) (*See* Appendix C, Element 161.)

(179) **Claim 12**. Claim 12 depends upon Claim 1. (See above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (See discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service. (*See* Appendix C, Element 162.)

(180) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system. (See Appendix C, Element 163.)

(181) **Claim 14.** As set forth in Claim 14, Popp discloses an apparatus for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31; Fig. 1.) Popp further discloses a processor (*Popp*: Col. 6, lines 9-14.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31) for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-

28; Fig. 3B.) Popp further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, McCloghrie RFC 1213 discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) *McCloghrie RFC 1213* further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) *McCloghrie RFC 1213* further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework

for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

McCloghrie RFC 1447 further discloses another example of a unique network address, that is virtually identical to the unique network address disclosed in the '506 patent. (*McCloghrie RFC 1447*: Pg. 8, ¶ 2; Pg. 9, ¶ 2; Pg. 10, ¶ 2.)

It would have been obvious to further combine the McCloghrie RFC 1447 and McCloghrie RFC 1213 references, as the McCloghrie RFC 1447 reference simply discloses another version of the management information base disclosed in McCloghrie RFC 1213, and both were known at the time that the Popp application was filed. (*See Appendix C, Elements 164-178.*)

(182) **Claim 15.** As set forth in Claim 15, Popp discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second

computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in *Popp*, *McCloghrie RFC 1213* discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) *McCloghrie RFC 1213* further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) *McCloghrie RFC 1213* further discloses assigning a

unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

McCloghrie RFC 1447 further discloses another example of a unique network address, that is virtually identical to the unique network address disclosed in the '506 patent. (*McCloghrie RFC 1447*: Pg. 8, ¶ 2; Pg. 9, ¶ 2; Pg. 10, ¶ 2.)

It would have been obvious to further combine the McCloghrie RFC 1447 and McCloghrie RFC 1213 references, as the McCloghrie RFC 1447 reference simply discloses another version of the management information base disclosed in McCloghrie RFC 1213, and both were known at the time that the Popp application was filed. (*See Appendix C, Elements 179-191.*)

(183) **Claim 16.** As set forth in Claim 16, Popp discloses a method for providing a commercial service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses using first computing resources operated by a first business entity to send first display information to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes first and second controls (*Popp*: Col. 9, lines 27-28, 31-47, 56-65; Col. 10, lines 19-28; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the first control (*Popp*: Col. 9, lines 31-47; Fig.

3B.) Popp further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*Popp*: Col. 9, lines 31-47.) Popp further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (*Popp*: Col. 10, lines 19-28; Fig. 3B.)

Additionally, Popp implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) Popp further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) Popp further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, McCloghrie RFC 1213 discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) McCloghrie RFC 1213 further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*:

Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) McCloghrie RFC 1213 further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

McCloghrie RFC 1447 further discloses another example of a unique network address, that is virtually identical to the unique network address disclosed in the '506 patent. (*McCloghrie RFC 1447*: Pg. 8, ¶ 2; Pg. 9, ¶ 2; Pg. 10, ¶ 2.)

It would have been obvious to further combine the McCloghrie RFC 1447 and McCloghrie RFC 1213 references, as the McCloghrie RFC 1447 reference simply discloses another version of the management information base disclosed in McCloghrie RFC 1213, and both were known at the time that the Popp application was filed. (*See Appendix C, Elements 192-204.*)

(184) **Claim 17.** Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g., discussion of Claim 16, above.*) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities. (*See Appendix C, Element 205.*)

(185) **Claim 18**. Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (*See, e.g.*, discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction. (*See* Appendix C, Element 206.)

(186) **Claim 19**. Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.*, discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities. (*See* Appendix C, Element 207.)

**SNQ 11. Popp in view of
McCloghrie RFC 1213, in further view of Miller**

Claims 1-19 of the '506 patent are obvious over Popp in view of McCloghrie RFC 1213, in further view of Miller.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 1-19 of the '506 patent are also obvious over Popp in view of McCloghrie RFC 1213, in further view of Miller.

A substantial new question is raised by Popp in view of McCloghrie RFC 1213 as to Claims 1-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was

never considered in view of McCloghrie RFC 1213 or Miller, each of which is “new art” that was never disclosed by the Applicant or considered by the Examiner during the original examination of the ‘506 patent. Popp may thus properly be considered as “old art” that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of McCloghrie RFC 1213, in further view of Miller, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of McCloghrie RFC 1213, in further view of Miller, contains or suggests each and every limitation of Claims 1-19. For this reason, Popp in view of McCloghrie RFC 1213, in further view of Miller, raises a substantial new question of patentability with respect to Claims 1-19.

(187) **Claim 1.** As set forth in Claim 1, Popp discloses a method for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9,

lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in *Popp*, *McCloghrie RFC 1213* discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) *McCloghrie RFC 1213* further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) *McCloghrie RFC 1213* further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

Miller further makes clear that the addressing scheme used in McCloghrie discloses assigning a unique network address. (*Miller*: Pg. 138.)

Here, Miller explains that in SNMP (the subject of McCloghrie RFC 1213), the way to use an IP address as an index is to append it to an object identifier. Miller is therefore used to explain the meaning of “index” in McCloghrie RFC 1213 and to show that the appending of IP addresses to object identifiers is inherent in RFC McCloghrie 1213. This it would have been obvious to combine Miller and McCloghrie RFC 1213 in interpreting the meaning of the term “index” in McCloghrie RFC 1213. (*See Appendix C, Elements 139-151.*)

(188) **Claim 2.** Claim 2 depends upon Claim 1. (See above.) As set forth in Claim 2, Popp further discloses that the second computer system includes an object router (*Popp*: Col. 3, lines 59-65; Col. 6, lines 49-52; Col. 6, line 63 – Col. 7, line 5; Col. 8, lines 49-59.) (*See Appendix C, Element 152.*)

(189) **Claim 3.** Claim 3 depends upon Claim 1. (See above.) As set forth in Claim 3, Popp further discloses that the second computer system includes a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-55.) Alternatively, it would

have been obvious that the virtual information store disclosed in Popp and/or McCloghrie RFC 1213 would be on the second computer system. (*See* Appendix C, Element 153.)

(190) **Claim 4**. Claim 4 depends upon Claim 1. (*See* above.) As set forth in Claim 4, Popp further discloses that the second computer system includes a value-added network switch (*Popp*: Col. 3, lines 59-65; Col. 8, lines 3-8, 17-31.) (*See* Appendix C, Element 154.)

(191) **Claim 5**. Claim 5 depends upon Claim 1. (*See* above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”) (*See* Appendix C, Element 155.)

(192) **Claim 6**. Claim 6 depends upon Claim 1. (*See* above.) As set forth in Claim 6, Popp further discloses a control that includes a Web page control (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 14-18; Col. 9, lines 10-12, 29-31; Col. 10, lines 19-28; Fig. 3B.) (*See* Appendix C, Element 156.)

(193) **Claim 7**. Claim 7 depends upon Claim 1. (*See* above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (*See* Appendix C, Element 157.)

(194) **Claim 8**. Claim 8 depends upon Claim 7. (*See* above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second

business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) (*See* Appendix C, Element 158.)

(195) **Claim 9**. Claim 9 depends upon Claim 1. (*See* above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.") (*See* Appendix C, Element 159.)

(196) **Claim 10**. Claim 10 depends upon Claim 1. (*See* above.) As set forth in Claim 10, Popp further discloses that the user device includes a Web browser (*Popp*: Col. 1, lines 26-34; 3:59-65; Col. 4, lines 5-18; Col. 9, lines 10-12, 29-31; Fig. 3B.) (*See* Appendix C, Element 160.)

(197) **Claim 11**. Claim 11 depends upon Claim 10. (*See* above.) As set forth in Claim 11, Popp further discloses that the display information includes Web page content (*Popp*: Col. 1, lines 26-34; Col. 4, lines 5-18; Col. 8, lines 44-48; Col. 9, lines 10-12, 29-31; Fig. 3B.) (*See* Appendix C, Element 161.)

(198) **Claim 12**. Claim 12 depends upon Claim 1. (*See* above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (*See* discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an

invention could have been used to include a payment service. (See Appendix C, Element 162.)

(199) **Claim 13**. Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system. (See Appendix C, Element 163.)

(200) **Claim 14**. As set forth in Claim 14, Popp discloses an apparatus for providing a service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31; Fig. 1.) Popp further discloses a processor (*Popp*: Col. 6, lines 9-14.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31) for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) Popp also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) Popp further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service

(*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in *Popp*, *McCloghrie RFC 1213* discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) *McCloghrie RFC 1213* further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) *McCloghrie RFC 1213* further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

Miller further makes clear that the addressing scheme used in McCloghrie discloses assigning a unique network address. (*Miller*: Pg. 138.)

Here, Miller explains that in SNMP (the subject of McCloghrie RFC 1213), the way to use an IP address as an index is to append it to an object identifier. Miller is therefore used to explain the meaning of “index” in McCloghrie RFC 1213 and to show that the appending of IP addresses to object identifiers is inherent in RFC McCloghrie 1213. This it would have been obvious to combine Miller and McCloghrie RFC 1213 in interpreting the meaning of the term “index” in McCloghrie RFC 1213. (*See Appendix C, Elements 164-178.*)

(201) **Claim 15**. As set forth in Claim 15, Popp discloses a machine-readable storage device including instructions executable by a processor for providing a commercial service over a digital network (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16; Col. 5, lines 11-12, 56-57; Col. 6, lines 9-31.) Popp further discloses a machine-readable storage device including one or more instructions executable by the processor for sending first display information from a first computer system to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes a control associated with a commercial service (*Popp*: Col. 9, lines 29-31; Fig. 3B.) Popp further discloses accepting a

first signal in response to a user input to activate the control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) *Popp* also discloses initiating, in response to the first signal, communication between the user device and a second computer system (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35; Col. 9, lines 31-47.) *Popp* further discloses using the second computer system for sending second display information to the user device (*Popp*: Col. 9, lines 31-47, 56-65; Fig. 3B), wherein the second display information includes a list of at least one commercial service (*Popp*: Col. 9, lines 56-65; Col. 10, lines 19-28; Fig. 3B), and accepting a second signal in response to a user input to select a commercial service from the list (*Popp*: Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses completing a commercial transaction relating to the selected commercial service (*Popp*: Col. 10, lines 19-28; Col. 26, lines 31-33; Col. 27, lines 5-7; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26-31, 53-55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in *Popp*, *McCloghrie RFC 1213* discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object

(*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) *McCloghrie RFC 1213* further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) *McCloghrie RFC 1213* further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with *McCloghrie RFC 1213* is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and *McCloghrie RFC 1213* discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

Miller further makes clear that the addressing scheme used in *McCloghrie* discloses assigning a unique network address. (*Miller*: Pg. 138.)

Here, Miller explains that in SNMP (the subject of *McCloghrie RFC 1213*), the way to use an IP address as an index is to append it to an object identifier. Miller is therefore used to explain the meaning of “index” in *McCloghrie RFC 1213* and to show that the appending of IP addresses to object identifiers is inherent in RFC *McCloghrie 1213*. This it would have been obvious to combine Miller and *McCloghrie RFC 1213* in interpreting the meaning of the term “index” in *McCloghrie RFC 1213*. (See Appendix C, Elements 179-191.)

(202) **Claim 16**. As set forth in Claim 16, Popp discloses a method for providing a commercial service over a digital network. (*Popp*: Title; Abstract; Col. 1, lines 7-8, 11-16.) Popp further discloses using first computing resources operated by a first business entity to

send first display information to a user device (*Popp*: Col. 9, lines 10-12, 27-28; Fig. 3B), wherein the first display information includes first and second controls (*Popp*: Col. 9, lines 27-28, 31-47, 56-65; Col. 10, lines 19-28; Fig. 3B.) *Popp* further discloses accepting a first signal in response to a user input to activate the first control (*Popp*: Col. 9, lines 31-47; Fig. 3B.) *Popp* further discloses first performing, in response to the first signal, a first commercial service associated with the first control, wherein the first performing is accomplished under the control of the first business entity interacting with the user device (*Popp*: Col. 9, lines 31-47.) *Popp* further discloses accepting a second signal in response to a user input to activate the second control; second performing, in response to the second signal, a second commercial service associated with the second control, wherein the second performing is accomplished under the control of a second business entity operating second computing resources and interacting with the user device (*Popp*: Col. 10, lines 19-28; Fig. 3B.)

Additionally, *Popp* implicitly or inherently discloses associating an object identity with information entries and attributes (*Popp*: Col. 6, line 52 – Col. 7, line 12; Col. 7, lines 24-35; Col. 9, lines 45-55; Col. 12, lines 1-6), wherein the object identity represents a networked object (*Popp*: Col. 8, lines 26–31, 53–55; Col. 9, lines 37-44, 56-63.) *Popp* further discloses storing said information entries and said attributes in an internal or external database, and therefore either explicitly, implicitly or inherently discloses storing them in a virtual information store (*Popp*: Col. 7, lines 31-35; Col. 8, lines 49-59; Col. 9, lines 48-61.) *Popp* further discloses, either implicitly or inherently, assigning a unique network address to said object identity (*Popp*: Col. 1, lines 61-67.)

Additionally, to the extent it is not fully disclosed in Popp, McCloghrie RFC 1213 discloses associating an object identity with information entries and attributes (*McCloghrie RFC 1213*: Pg. 14, ¶ 6), wherein the object identity represents a networked object (*McCloghrie RFC 1213*: Pg. 10, ¶ 4.) McCloghrie RFC 1213 further discloses storing said information entries and said attributes in a virtual information store (*McCloghrie RFC 1213*: Pg. 10, ¶ 4; Pg. 14, ¶ 6; Pg. 15, ¶ 6.) McCloghrie RFC 1213 further discloses assigning a unique network address to said object identity (*McCloghrie RFC 1213*: Pg. 31, ¶ 6; Pgs. 33-34, ¶ 6.)

The motivation to combine Popp with McCloghrie RFC 1213 is apparent from the very purpose of Popp itself. Popp discloses an object-oriented system for managing internet transactions, and McCloghrie RFC 1213 discloses a known protocol providing a framework for managing objects over a network, such as the Internet. Thus one of ordinary skill in the art would have naturally looked to the protocol disclosed in RFC 1155 in developing a system such as the one disclosed in Popp.

Miller further makes clear that the addressing scheme used in McCloghrie discloses assigning a unique network address. (*Miller*: Pg. 138.)

Here, Miller explains that in SNMP (the subject of McCloghrie RFC 1213), the way to use an IP address as an index is to append it to an object identifier. Miller is therefore used to explain the meaning of “index” in McCloghrie RFC 1213 and to show that the appending of IP addresses to object identifiers is inherent in RFC McCloghrie 1213. This it would have been obvious to combine Miller and McCloghrie RFC 1213 in interpreting the meaning of the term “index” in McCloghrie RFC 1213. (*See Appendix C, Elements 192-204.*)

(203) **Claim 17**. Claim 17 depends upon Claim 16. (See above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g.,* discussion of Claim 16, above.) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities. (*See* Appendix C, Element 205.)

(204) **Claim 18**. Claim 18 depends upon Claim 16. (See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (*See, e.g.,* discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction. (*See* Appendix C, Element 206.)

(205) **Claim 19**. Claim 19 depends upon Claim 16. (See above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.,* discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities. (*See* Appendix C, Element 207.)

SNQ 12. Popp in view of Payne

Claims 5, 7-9, 12-13 and 17-19 of the '506 patent are obvious over Popp in view of Payne.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 5, 7-9, 12-13 and 17-19 of the '506 patent are also obvious over Popp in view of Payne.

A substantial new question is raised by Popp as to Claims 5, 7-9, 12-13 and 17-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was never considered in view of Payne, which was never cited by the Examiner or used in rejecting any claims during the original examination of the '506 patent. Popp may thus properly be considered as "old art" that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of Payne, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of Payne contains or suggests each and every limitation of Claims 5, 7-9, 12-13 and 17-19. For this reason, Popp in view of Payne raises a substantial new question of patentability with respect to Claims 5, 7-9, 12-13 and 17-19.

(206) **Claim 5.** Claim 5 depends upon Claim 1, which is obvious over Popp. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) *See, e.g.,* Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("Popp teaches invoking/switching to one of internal applications for accessing external databases It

would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”)

Additionally, Payne discloses implicitly or inherently that the second computer system includes a legacy database (‘519 Application, Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Col. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 155.)

(207) **Claim 7.** Claim 7 depends upon Claim 1, which is obvious over Popp. (*See* above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 157.)

(208) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first corporate network is operated by a first business entity and the second corporate network is operated by a second business entity (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 158.)

(209) **Claim 9.** Claim 9 depends upon Claim 1, which is obvious over Popp. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. See, e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, e.g., legacy database.")

Additionally, Payne further discloses that the second computer system includes a legacy computing system (e.g., Payne teaches using an "existing financial system network"

with information about existing accounts, which inherently would involve the use of existing, or “legacy” computer systems containing such information) (*‘519 Application*: Pg. 2, lines 8-13. 18-20; Pg. 2, line 23 – Pg. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 159.*)

(210) **Claim 12.** Claim 12 depends upon Claim 1, which is obvious over Popp. (*See above.*) As set forth in Claim 12, Popp discloses providing at least one commercial service. (*See discussion of Claim 1, above.*) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service.

Additionally, Payne discloses that the list of at least one commercial service includes a payment service (*e.g.*, Payne provides an option of opening an account to make payments, as well as making a payment using such an account) (*Payne*: Col. 6, lines 1-14, 15-30, 31-42; Col. 6, line 43 – Col. 7, line 50.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 162.*)

(211) **Claim 13.** Claim 13 depends upon Claim 12. (*See above.*) As set forth in Claim 13, Popp further discloses using the system with external databases (*see discussion of*

Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system.

Additionally, Payne further discloses that the user is provided with access to a payment electronic back office system (*e.g.*, Payne teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) ('519 Application: Pg. 2, lines 18-20; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 163.)

(212) Claim 17. Claim 17 depends upon Claim 16, which is obvious over Popp. (*See* above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g.*, discussion of Claim 16, above.) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities.

Additionally, Payne further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*e.g.*, Payne teaches exchanging information between the merchant computer and the payment computer, which Payne says may be operated by different entities.) (*Payne*: Col. 1, lines 27-35) ('519 Application: Pg. 14, lines 9-18; Pg. 19, lines 7-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 205.)

(213) **Claim 18**. Claim 18 depends upon Claim 16, which is obvious over Popp. (See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (See, e.g., discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction.

Additionally, Payne further discloses an embodiment where there is a three-way transaction between the first computing resources (e.g., a merchant computer), the second computing resources (e.g., a payment computer) and the user device (e.g., a buyer computer) (Payne: Col. 1, lines 27-35; Col. 4, lines 35-45; Fig. 1) ('519 Application: Pg. 14, lines 9-18; Pg. 16, lines 5-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 206.)

(214) **Claim 19**. Claim 19 depends upon Claim 16, which is obvious over Popp. (See above.) As set forth in Claim 19, Popp further discloses that a plurality of computing

resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.*, discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities.

Additionally, Payne further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*e.g.*, Payne teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity with its own computing resources) (*Payne*: Col. 4, lines 35-45; Col. 7, lines 24-27) ('519 *Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 207.*)

SNQ 13. Popp in view of Gifford

Claims 5, 7-9, 12-13 and 17-19 of the '506 patent are obvious over Popp in view of Gifford.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 5, 7-9, 12-13 and 17-19 of the '506 patent

are also obvious over Popp in view of Gifford, given the knowledge of one of ordinary skill in the art at the time that the application for the '506 application was filed.

A substantial new question is raised by Popp as to Claims 5, 7-9, 12-13 and 17-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was never considered in view of the Patent Owner's new statements regarding the scope of the claims. In particular, the Patent Owner's statements concerning what constitutes an object, an object identity, information entries and attributes, a virtual information store and a unique network address make clear that these elements were not novel, and that they existed in the prior art, including Popp. Additionally, Popp was never considered in view of Gifford, which was never cited by the Examiner nor considered in rejecting any claims during the original examination of the '506 patent. Popp in view of Gifford may thus properly be considered as "old art" that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of Gifford, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of Gifford contains or suggests each and every limitation of Claims 5, 7-9, 12-13 and 17-19. For this reason, Popp in view of Gifford raises a substantial new question of patentability with respect to Claims 5, 7-9, 12-13 and 17-19.

(215) **Claim 5**. Claim 5 depends upon Claim 1, which is obvious over Popp. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21,

lines 43-54.) *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”)

Additionally, Gifford discloses implicitly or inherently that the second computer system includes a legacy database (*Gifford*: Col. 1, lines 36-40, 45-48, 50-53; Col. 2, lines 46-49; Col. 3, lines 46-48.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 155.)

(216) **Claim 7.** Claim 7 depends upon Claim 1, which is obvious over Popp. (*See* above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Gifford discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Gifford*: Col. 1, lines 20-24, 50-53, 63-66; Col. 2, lines 16-32.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other

computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 157.)

(217) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Gifford discloses that the first corporate network is operated by a first business entity and the second corporate network is operated by a second business entity (*Gifford*: Col. 1, lines 20-24, 63-66; Col. 2, lines 16-32.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 158.)

(218) **Claim 9.** Claim 9 depends upon Claim 1, which is obvious over Popp. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. See, e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, e.g., legacy database.")

Additionally, Gifford further discloses that the second computer system includes a legacy computing system (*e.g.*, Gifford teaches using an “existing financial system network” with information about existing accounts, which inherently would involve the use of existing, or “legacy” computer systems containing such information) (*Gifford*: Col. 1, lines 36-40, 45-48, 50-53; Col. 2, lines 46-49; Col. 3, lines 46-48.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 159.)

(219) **Claim 12**. Claim 12 depends upon Claim 1, which is obvious over Popp. (*See* above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (*See* discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service.

Additionally, Gifford discloses that the list of at least one commercial service includes a payment service (*Gifford*: Col. 3, lines 12-25.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 162.)

(220) **Claim 13**. Claim 13 depends upon Claim 12. (*See* above.) As set forth in Claim 13, Popp further discloses using the system with external databases (*see* discussion of

Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system.

Additionally, Gifford further discloses that the user is provided with access to a payment electronic back office system (*e.g.*, Gifford teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) (*Gifford*: Col. 1, lines 45-48; Col. 2, lines 46-49; Col. 3, lines 46-48.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 163.)

(221) **Claim 17**. Claim 17 depends upon Claim 16, which is obvious over Popp. (*See* above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g.*, discussion of Claim 16, above.) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities.

Additionally, Gifford further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*e.g.*, Gifford teaches exchanging information between the merchant computer and the payment computer, which Gifford says may be operated by different entities.) (*Gifford*: Col. 6, lines 3-13; Col. 7, lines 56-63.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 205.)

(222) **Claim 18.** Claim 18 depends upon Claim 16, which is obvious over Popp. (See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (See, e.g., discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction.

Additionally, Gifford further discloses an embodiment where there is a three-way transaction between the first computing resources (e.g., a merchant computer), the second computing resources (e.g., a payment computer) and the user device (e.g., a buyer computer) (Gifford: Col. 6, lines 3-13, 50-59.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 206.)

(223) **Claim 19.** Claim 19 depends upon Claim 16, which is obvious over Popp. (See above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a

plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.*, discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated be separate business entities.

Additionally, Gifford further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*e.g.*, Gifford teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity with its own computing resources) (*Gifford*: Col. 1, lines 20-24, 63-66; Col. 2, lines 16-32.)

It would have been obvious to combine the Popp reference with similar disclosures from Gifford, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 207.*)

SNQ 14. Popp in view of Payne, in further view of Gifford

Claims 5, 7-9, 13, and 17-19 of the '506 patent are obvious over Popp in view of Payne, in further view of Gifford.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 5, 7-9, 13, and 17-19 of the '506 patent are also obvious over Popp in view of Payne, in further view of Gifford.

A substantial new question is raised by Popp in view of Payne, in further view of Gifford as to Claims 5, 7-9, 13, and 17-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was never considered in view of Payne or Gifford, neither of which was cited by the Examiner or used in rejecting any claims during the original examination of the '506 patent. Popp in view of Payne, in further view of Gifford, may thus properly be considered as "old art" that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of Payne, in further view of Gifford, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of Payne, in further view of Gifford, contains or suggests each and every limitation of Claims 5, 7-9, 13, and 17-19. For this reason, Popp in view of Payne, in further view of Gifford, raises a substantial new question of patentability with respect to Claims 5, 7-9, 13, and 17-19.

(224) **Claim 5**. Claim 5 depends upon Claim 1, which is obvious over Popp. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.")

Additionally, Payne discloses implicitly or inherently that the second computer system includes a legacy database ('519 Application, Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Col. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the second computer system includes a legacy database (*Gifford*: Col. 1, lines 36-40, 45-48, 50-53; Col. 2, lines 46-49; Col. 3, lines 46-48.)

In view of Gifford's disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Payne's invention would have been used to access any conventional databases, *e.g.*, a "legacy" database. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.")

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix C, Element 155.*)

(225) Claim 7. Claim 7 depends upon Claim 1, which is obvious over Popp. (See above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the first computer system is in a first corporate network and wherein the second computer system is in a second corporate network (*Gifford*: Col. 1, lines 20-24, 50-53, 63-66; Col. 2, lines 16-32.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (See *Payne*, Col. 1, lines 18-24.) (See Appendix C, Element 157.)

(226) **Claim 8.** Claim 8 depends upon Claim 7. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first corporate network is operated by a first business entity and the second corporate network is operated by a second business entity (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Gifford*: Col. 1, lines 20-24. 63-66; Col. 2, lines 16-32.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (See *Payne*, Col. 1, lines 18-24.) (See Appendix C, Element 158.)

(227) **Claim 9.** Claim 9 depends upon Claim 1, which is obvious over Popp. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system

includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.")

Additionally, Payne further discloses that the second computer system includes a legacy computing system (*e.g.*, Payne teaches using an "existing financial system network" with information about existing accounts, which inherently would involve the use of existing, or "legacy" computer systems containing such information) (*'519 Application*: Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Pg. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that the second computer system includes a legacy computing system (*Gifford*: Col. 1, lines 36-40, 45-48, 50-53; Col. 2, lines 46-49; Col. 3, lines 46-48.)

In view of Gifford's disclosure of using his system with existing financial networks, it would have been obvious to one skilled in the art that Payne's invention would have been used to access any conventional computer systems, *e.g.*, a "legacy" computer system. *See*,

e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See* Payne, Col. 1, lines 18-24.) (*See* Appendix C, Element 159.)

(228) **Claim 13**. Claim 13 depends upon Claim 12, which is obvious over Popp in view of Payne. (*See* above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp’s system could be used with existing databases/computer systems associated with a payment electronic back office system.

Additionally, Payne further discloses that the user is provided with access to a payment electronic back office system (*e.g.*, Payne teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) (‘519 Application: Pg. 2, lines 18-20; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other

computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses providing a user with access to a payment electronic back office system (*Gifford*: Col. 1, lines 45-48; Col. 2, lines 46-49; Col. 3, lines 46-48.)

In view of Gifford's disclosure of using his system with existing financial networks, including banks, to authorize payments and other debits from a user's account, it would have been obvious to one skilled in the art that Payne's invention would have been used to access a bank back office system. This is made even clearer when looking at how Applicant described accessing a bank back office system. Applicant describes a user being provided access to a payment electronic back office system as follows: "Once Bank POSvc application 510 has been activated, user 100 will be able to connect to Bank services and utilize the application to perform banking transactions, thus accessing data from a host or data repository 575 in the Bank "Back Office." This description is similar, if not identical, to the services provided in Payne. ('506 patent, Col. 7, lines 32-36)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix C*, Element 163.)

(229) **Claim 17**. Claim 17 depends upon Claim 16, which is obvious over Popp. (See above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g.*, discussion of Claim 16, above.) In view of this

disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities.

Additionally, Payne further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*e.g.*, Payne teaches exchanging information between the merchant computer and the payment computer, which Payne says may be operated by different entities.) (*Payne*: Col. 1, lines 27-35) (*'519 Application*: Pg. 14, lines 9-18; Pg. 19, lines 7-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*Gifford*: Col. 6, lines 3-13; Col. 7, lines 56-63.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix C, Element 205.*)

(230) **Claim 18.** Claim 18 depends upon Claim 16, which is obvious over Popp.

(See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (*See, e.g.,* discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction.

Additionally, Payne further discloses an embodiment where there is a three-way transaction between the first computing resources (*e.g.,* a merchant computer), the second computing resources (*e.g.,* a payment computer) and the user device (*e.g.,* a buyer computer) (*Payne*: Col. 1, lines 27-35; Col. 4, lines 35-45; Fig. 1) (*'519 Application*: Pg. 14, lines 9-18; Pg. 16, lines 5-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that a three-way transaction is achieved between the first computing resources, the second computing resources and the user device (*Gifford*: Col. 6, lines 3-13; Col. 6, lines 50-59.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the "entire disclosure" of the application to which Gifford claims priority, the '519 Application, the specification of which is

substantially identical to the specification in the issued Gifford patent. (*See* Payne, Col. 1, lines 18-24.) (*See* Appendix C, Element 206.)

(231) **Claim 19**. Claim 19 depends upon Claim 16, which is obvious over Popp. (*See* above.) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.,* discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities.

Additionally, Payne further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*e.g.,* Payne teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity with its own computing resources) (*Payne*: Col. 4, lines 35-45; Col. 7, lines 24-27) (*'519 Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web.

To the extent that it is deemed not fully disclosed by Payne, Gifford further discloses that plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Gifford*: Col. 1, lines 20-24, 63-66; Col. 2, lines 16-32.)

The motivation to combine Payne with Gifford is expressly stated in the Payne reference itself, which incorporates by reference the “entire disclosure” of the application to which Gifford claims priority, the ‘519 Application, the specification of which is substantially identical to the specification in the issued Gifford patent. (*See Payne*, Col. 1, lines 18-24.) (*See Appendix C, Element 207.*)

SNQ 15. Popp in view of Rose RFC 1155, in further view of Payne

Claims 5, 7-9, 12-13, and 17-19 of the ‘506 patent are obvious over Popp in view of Rose RFC 1155, in further view of Payne.

Although Requester submits that Claims 1-19 of the ‘506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 5, 7-9, 12-13, and 17-19 of the ‘506 patent are also obvious over Popp in view of Rose RFC 1155, in further view of Payne.

A substantial new question is raised by Popp in view of Rose RFC 1155, in further view of Payne, as to Claims 5, 7-9, 12-13, and 17-19 of the ‘506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant’s then-pending claims during the ‘506 patent’s prior examination, Popp was never considered in view of Rose RFC 1155 or Payne. Rose RFC 1155 is “new art” that was never disclosed by the Applicant or considered by the Examiner during the original examination of the ‘506 patent; Payne, while it was cited by Applicant, was never cited by the Examiner or used in rejecting any claims. Popp may thus properly be considered as “old art” that is being presented in a new light. *See MPEP* § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of

Popp in view of Rose RFC 1155, in further view of Payne, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of Rose RFC 1155, in further view of Payne, contains or suggests each and every limitation of 5, 7-9, 12-13, and 17-19. For this reason, Popp in view of Rose RFC 1155, in further view of Payne, raises a substantial new question of patentability with respect to 5, 7-9, 12-13, and 17-19.

(232) **Claim 5**. Claim 5 depends upon Claim 1, which is obvious over Popp in view of Rose RFC 1155. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) *See, e.g.*, Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”)

Additionally, Payne discloses implicitly or inherently that the second computer system includes a legacy database (‘519 Application, Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Col. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 155.)

(233) **Claim 7**. Claim 7 depends upon Claim 1, which is obvious over Popp in view of Rose RFC 1155. (See above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 157.)

(234) **Claim 8**. Claim 8 depends upon Claim 7, which is obvious over Popp in view of Rose RFC 1155. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first corporate network is operated by a first business entity and the second corporate network is operated by a second business entity (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple

computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 158.)

(235) **Claim 9**. Claim 9 depends upon Claim 1, which is obvious over Popp in view of Rose RFC 1155. (See above.) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. See, e.g., Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, e.g., legacy database.")

Additionally, Payne further discloses that the second computer system includes a legacy computing system (e.g., Payne teaches using an "existing financial system network" with information about existing accounts, which inherently would involve the use of existing, or "legacy" computer systems containing such information) (*'519 Application*: Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Pg. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 159.)

(236) **Claim 12.** Claim 12 depends upon Claim 1, which is obvious over Popp in view of Rose RFC 1155. (See above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (See discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service.

Additionally, Payne discloses that the list of at least one commercial service includes a payment service (*e.g.*, Payne provides an option of opening an account to make payments, as well as making a payment using such an account) (*Payne*: Col. 6, lines 1-14, 15-30, 31-42; Col. 6, line 43 – Col. 7, line 50.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 162.*)

(237) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system.

Additionally, Payne further discloses that the user is provided with access to a payment electronic back office system (*e.g.*, Payne teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) (*'519 Application*: Pg. 2, lines 18-20; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 163.)

(238) **Claim 17**. Claim 17 depends upon Claim 16, which is obvious over Popp in view of Rose RFC 1155. (See above.) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (See, e.g., discussion of Claim 16, above.) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities.

Additionally, Payne further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (e.g., Payne teaches exchanging information between the merchant computer and the payment computer, which Payne says may be operated by different entities.) (Payne: Col. 1, lines 27-35) ('519 Application: Pg. 14, lines 9-18; Pg. 19, lines 7-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 205.)

(239) **Claim 18**. Claim 18 depends upon Claim 16, which is obvious over Popp in view of Rose RFC 1155. (See above.) As set forth in Claim 18, Popp further discloses

communication between/among a number of different computers. (*See, e.g.*, discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction.

Additionally, Payne further discloses an embodiment where there is a three-way transaction between the first computing resources (*e.g.*, a merchant computer), the second computing resources (*e.g.*, a payment computer) and the user device (*e.g.*, a buyer computer) (*Payne*: Col. 1, lines 27-35; Col. 4, lines 35-45; Fig. 1) (*'519 Application*: Pg. 14, lines 9-18; Pg. 16, lines 5-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 206.*)

(240) **Claim 19.** Claim 19 depends upon Claim 16, which is obvious over Popp in view of Rose RFC 1155. (*See above.*) As set forth in Claim 19, Popp further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.*, discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities.

Additionally, Payne further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (e.g., Payne teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity with its own computing resources) (*Payne*: Col. 4, lines 35-45; Col. 7, lines 24-27) ('519 *Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 207.)

**SNQ 16. Popp in view of
McCloghrie RFC 1213, in further view of Payne**

Claims 5, 7-9, 12-13, and 17-19 of the '506 patent are obvious over Popp in view of McCloghrie RFC 1213, in further view of Payne.

Although Requester submits that Claims 1-19 of the '506 patent are anticipated by and/or obvious over Popp, alternatively, Claims 5, 7-9, 12-13, and 17-19 of the '506 patent are also obvious over Popp in view of McCloghrie RFC 1213, in further view of Payne.

A substantial new question is raised by Popp in view of McCloghrie RFC 1213, in further view of Payne, as to Claims 5, 7-9, 12-13, and 17-19 of the '506 patent. While Popp was cited by the Examiner in rejecting all but one of Applicant's then-pending claims during the '506 patent's prior examination, Popp was never considered in view of McCloghrie RFC 1213 or Payne. McCloghrie RFC 1213 is "new art" that was never disclosed by the

Applicant or considered by the Examiner during the original examination of the '506 patent; Payne, while it was cited by Applicant, was never cited by the Examiner or used in rejecting any claims. Popp may thus properly be considered as "old art" that is being presented in a new light. *See* MPEP § 2642(II)(A). Requester submits that a reasonable examiner would consider this teaching of Popp in view of McCloghrie RFC 1213, in further view of Payne, as set forth below and in the detailed claim charts that follow in the referenced Appendix (see claim-by claim analysis below), important in determining whether or not the claims are patentable. In particular, as set forth herein, Popp in view of McCloghrie RFC 1213, in further view of Payne, contains or suggests each and every limitation of Claims 5, 7-9, 12-13, and 17-19. For this reason, Popp in view of McCloghrie RFC 1213, in further view of Payne, raises a substantial new question of patentability with respect to Claims 5, 7-9, 12-13, and 17-19.

(241) **Claim 5.** Claim 5 depends upon Claim 1, which is obvious over Popp in view of McCloghrie RFC 1213. (See above.) As set forth in Claim 5, Popp further discloses, whether inherently or explicitly, that the second computer system includes a legacy database (*Popp*: Col. 8, lines 17-31; Col. 21, lines 43-54.) *See, e.g.,* Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 ("Popp teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.,* legacy database.")

Additionally, Payne discloses implicitly or inherently that the second computer system includes a legacy database ('519 Application, Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Col. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 155.)

(242) **Claim 7.** Claim 7 depends upon Claim 1, which is obvious over Popp in view of McCloghrie RFC 1213. (See above.) As set forth in Claim 7, Popp further implicitly or inherently discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first computer system is in a first corporate network and the second computer system is in a second corporate network (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 157.)

(243) **Claim 8.** Claim 8 depends upon Claim 7, which is obvious over Popp in view of McCloghrie RFC 1213. (See above.) As set forth in Claim 8, Popp further implicitly or inherently discloses that the first corporate network is operated by a first business entity and wherein the second corporate network is operated by a second business entity (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.)

Additionally, Payne discloses that the first corporate network is operated by a first business entity and the second corporate network is operated by a second business entity (*Payne*: Col. 4, lines 35-45.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 158.*)

(244) **Claim 9**. Claim 9 depends upon Claim 1, which is obvious over Popp in view of McCloghrie RFC 1213. (*See above.*) As set forth in Claim 9, Popp further discloses that the second computer system includes a legacy computing system (*Popp*: Col. 5, lines 11-12, 56-57; Col. 6, lines 25-31; Col. 15, lines 52-54; Fig. 1.) Further, given Popp's disclosure of external databases, it is implicit that existing (legacy) computing systems would be used. *See, e.g.,* Exhibit 2, April 2, 2007 Office Action, Exh. Pg. 250 (“[Prior art reference] teaches invoking/switching to one of internal applications for accessing external databases It would have been obvious to one skilled in the art that [prior art reference] would have been used to access any conventional databases, *e.g.*, legacy database.”)

Additionally, Payne further discloses that the second computer system includes a legacy computing system (*e.g.*, Payne teaches using an “existing financial system network” with information about existing accounts, which inherently would involve the use of existing, or “legacy” computer systems containing such information) (*'519 Application*: Pg. 2, lines 8-13, 18-20; Pg. 2, line 23 – Pg. 3, line 2; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 159.)

(245) **Claim 12.** Claim 12 depends upon Claim 1, which is obvious over Popp in view of McCloghrie RFC 1213. (See above.) As set forth in Claim 12, Popp discloses providing at least one commercial service. (See discussion of Claim 1, above.) It would have been obvious to one of ordinary skill in the art that such an invention could have been used to include a payment service.

Additionally, Payne discloses that the list of at least one commercial service includes a payment service (*e.g.*, Payne provides an option of opening an account to make payments, as well as making a payment using such an account) (*Payne*: Col. 6, lines 1-14, 15-30, 31-42; Col. 6, line 43 – Col. 7, line 50.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 162.)

(246) **Claim 13.** Claim 13 depends upon Claim 12. (See above.) As set forth in Claim 13, Popp further discloses using the system with external databases (see discussion of Claims 5 and 9, above. In view of this disclosure, it would have been obvious to one of

ordinary skill in the art that Popp's system could be used with existing databases/computer systems associated with a payment electronic back office system.

Additionally, Payne further discloses that the user is provided with access to a payment electronic back office system (*e.g.*, Payne teaches that using the payment application, the user accesses data from an existing financial network that is used to perform payment services) (*'519 Application*: Pg. 2, lines 18-20; Pg. 5, lines 12-15; Pg. 8, lines 3-5.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See Appendix C, Element 163.*)

(247) **Claim 17.** Claim 17 depends upon Claim 16, which is obvious over Popp in view of McCloghrie RFC 1213. (*See above.*) As set forth in Claim 17, Popp further discloses exchanging information between multiple computers (*See, e.g.*, discussion of Claim 16, above.) In view of this disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that these systems might be owned by different business entities.

Additionally, Payne further discloses exchanging information between the first and second business entities in order to complete a transaction in response to one or more of the signals (*e.g.*, Payne teaches exchanging information between the merchant computer and the payment computer, which Payne says may be operated by different entities.) (*Payne*: Col. 1, lines 27-35) (*'519 Application*: Pg. 14, lines 9-18; Pg. 19, lines 7-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 205.)

(248) **Claim 18.** Claim 18 depends upon Claim 16, which is obvious over Popp in view of McCloghrie RFC 1213. (See above.) As set forth in Claim 18, Popp further discloses communication between/among a number of different computers. (See, e.g., discussion of Claim 16, above.) In view of Popp's disclosure of exchanging information between multiple computers with differing systems, it would have been obvious to one of ordinary skill in the art that this transaction would or could be a three-way transaction.

Additionally, Payne further discloses an embodiment where there is a three-way transaction between the first computing resources (e.g., a merchant computer), the second computing resources (e.g., a payment computer) and the user device (e.g., a buyer computer) (Payne: Col. 1, lines 27-35; Col. 4, lines 35-45; Fig. 1) ('519 Application: Pg. 14, lines 9-18; Pg. 16, lines 5-14.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (See Appendix C, Element 206.)

(249) **Claim 19.** Claim 19 depends upon Claim 16, which is obvious over Popp in view of McCloghrie RFC 1213. (See above.) As set forth in Claim 19, Popp further

discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*Popp*: Col. 1, lines 19-25; Col. 3, lines 36-40; Col. 7, lines 28-35.) Alternatively, in view of Popp's disclosure of multiple computers (*See, e.g.*, discussion of Claim 16, above) it would have been obvious to one of ordinary skill in the art that the commercial services provided by Popp could utilize resources on separate corporate networks operated by separate business entities.

Additionally, Payne further discloses that a plurality of computing resources are used, each on a separate corporate network, and each operated by one of a plurality of different business entities (*e.g.*, Payne teaches having a merchant (first business entity with computing resources) avoid risk by allowing for a purchase transaction to be pre-approved or otherwise verified by the corporate entity making the payment to the merchant (second business entity with its own computing resources) (*Payne*: Col. 4, lines 35-45; Col. 7, lines 24-27) ('519 *Application*: Pg. 1, lines 19-22; Pg. 3, lines 11-14; Pg. 4, lines 8-23.)

It would have been obvious to combine the Popp reference with similar disclosures from Payne, as both disclose systems for conducting commercial transactions using multiple computers communicating by sending messages and accessing applications on other computers in response to activation of user controls from Web pages over the World Wide Web. (*See* Appendix C, Element 207.)

V. DETAILED EXPLANATION OF PERTINENCY AND MANNER OF APPLYING PRIOR ART REFERENCES UNDER 37 C.F.R. § 1.915(B)(3)

Pursuant to 37 C.F.R. § 1.915(b)(3), Requester provides in the claim charts attached as Appendices A-C a further detailed explanation of the pertinency and manner of applying the cited prior art to every claim for which reexamination is requested. The attached claim

Certificate of Service in Compliance With 37 C.F.R. § 1.915(b)(6)

The undersigned certifies that copies of the Request for *Inter Partes* Reexamination, including Exhibits 1-16 and Appendices A-C, was served on the purported owner of the patent at the last address of record:

WebXchange, Inc.
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and on counsel for WebXchange, Inc. in the WebX Litigation (via first-class mail):

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in accordance with 37 C.F.R. § 1.915(b)(6), on the 19th day of December, 2008.

Respectfully submitted,

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